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Evaluating the Values, Experiences, Training and Behaviours of Nursing Students in Promoting Healthy Lifestyles using the 'Making Every Contact Count (MECC) Initiative: A Mixed Methods Study

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ABSTRACT

It is widely recognised that an increased demand on health and social care systems in England is partly attributable to increasing incidence and prevalence in avoidable illnesses resulting from lifestyle choices and behaviours. Smoking, drug and alcohol use, poor diet, obesity and low physical activity are linked to many poor health conditions including heart, liver and respiratory diseases, and stroke and cancers, which are the leading causing for early mortality in England. In acknowledgement of this, Public Health England and Health Education England launched the 'Making Every Contact Count' (MECC) initiative in 2010 to support all healthcare professionals to maximise the delivery of public health messages in everyday interactions with patients/service users with the aim of embedding health promotion into organisational culture. MECC is widely cited as being an evidence-based initiative despite there being very limited published research regarding its impacts on professional practice and patient outcomes. This is in part due to there being no national standard in England for MECC and the emergence of two fundamentally different and potentially incompatible approaches to delivery (the Wessex and Yorkshire approaches) and hybrids thereof. There is limited published quantitative research around MECC in practice and evidence rarely relates to the role of the nurse in public health promotion.

A mixed methods design comprising a survey followed by interviews and focus groups was used to evaluate the values, experiences, training and behaviours of student nurses at a University in the East Midlands who received training in a hybrid MECC model. Three questionnaires were completed by the first-year students (n=137) before and after training and paired statistical analyses were undertaken to evaluate whether there were any differences in population mean ranks in the students' values, perceptions and actions in practice. Due to time restrictions, the qualitative component was undertaken with second year students (n=7) who had received the same hybrid MECC training and involved thematic analysis of transcripts from interviews and focus groups and was used to enrich and add insight to the quantitative data in the interpretation of the results.

Results showed that students had similar pre and post training perceived levels of opportunity and motivation to MECC. Students reported improved perceived capability to hold a MECC conversation following training, however they held MECC conversations less frequently in practice. Emerging themes from the thematic analysis showed that personal identity, their student role, the placement environment and its inherent culture and the complexities of interacting with patients in the clinical setting all influenced the students' actions in practice.

This research demonstrates that whilst knowledge of MECC is important, difficult conversation skills and confidence are required by the student nurses to enable them to practice MECC. The current academic teaching and the organisational influences including from role models and issues of power and hierarchy in practice appear to be contributing to the dissonance noted between perceptions and actions in practice. The findings improve the evidence base relating to MECC nursing practice and may help to inform future MECC academic training provision.

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LIST OF ABBREVIATIONS

BA	Brief Advice
BI	Brief Intervention
HCS	Health Conversation Skills
HBM	Health Belief Model
HEE	Health Education England
MECC	Making Every Contact Count
ODQ	Open Discovery Questions
PIS	Participant Information Sheet
QoL	Quality of Life
TPB	Theory of Planned Behaviour
VBA	Very Brief Advice
VBI	Very Brief Intervention

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Health Promotion Policy and Context

It is widely recognised that the steadily rising total population of England is creating an increased demand on health and social care systems, but that further pressures are being driven by an increasing incidence and prevalence in avoidable illnesses resulting from lifestyle choices and behaviours (National Health Service, 2019b). The Marmot Review (Marmot, 2010) recognised the need to prioritise investment in ill-health prevention and health promotion across government departments to tackle the burden on social care. Since its publication, many interventions and policies have been implemented aimed at ill health prevention as cited by the recent review 'Marmot Review 10 Years On' (Marmot, 2020). This is reflected in Public Health England (PHE) latest Strategy for 2020-2025 (2019), which acknowledges that tackling unhealthy behaviours through health promotion is vital in the drive to reduce the incidence of illness and poor health. Furthermore the importance of health promotion is recognised in the NHS Long Term Plan, which sets out a commitment to take action to improve health promotion and ill health prevention (NHS, 2019) and considers that the growing demands on NHS services are to some extent modifiable by prevention of avoidable diseases through, for example, implementation of smoking cessation and obesity reduction services.

The state of the nation's health is highlighted in the latest figures from the Office for National Statistics (ONS), which show that the trend in increases in life expectancy for both males and females in England slowed down in the period 2016-2018 (ONS, 2019). Whilst life expectancy improved slightly the rate of increase remains lower than in many other European and high-income countries, such as Austria, France and Denmark (ONS, 2019). The leading causes of death in England reported by Public Health England are from heart disease, Alzheimer's and dementia, respiratory disease, stroke, liver disease and various cancers (PHE, 2018a). At a population level, the global burden of disease study for the period 1990-2016, (Steel et al,

2018) showed that health behaviours - smoking, drug and alcohol use, dietary risks and low physical activity -were among the top risk factors associated with these diseases, though no causal link with the death rates for England are reported. As well as contributing to early mortality, these risk factors also contribute to increasing morbidity rates, particularly associated with obesity, diabetes, high cholesterol and high blood pressure, which can reduce the individuals Quality of Life (QoL) (PHE, 2018a) as well as placing a further burden on health and social care services. The costs to the NHS of smoking, excessive alcohol consumption and obesity alone are in the region of £12.15 billion per annum (PHE, 2017; PHE, 2014; Tovey, 2017) with further overall costs to society from loss of economic productivity, alcohol-related crime and costs of social care.

Traditionally, the implementation of health promotion interventions at an individual level was predominantly the role of specialist nurses, such as school nurses, health visitors and occupational health nurses (Donovan and Davies, 2016). More recently however, and in line with PHE and the NHS's visions (PHE, 2019; NHS, 2019), health promotion and ill health prevention are increasingly seen as requirements of healthcare professionals and this is reflected in codes of practice and standards for regulatory bodies (General Medical Council, 2017; Nursing and Midwifery Council (NMC), 2018). Health professionals are defined by the World Health Organisation (WHO) (2013) as persons who 'study, diagnose, treat or prevent human illness, injury and physical or mental impairment' and include amongst others, doctors, nurses and midwives, dentists, paramedics, pharmacists and Allied Health Professionals including occupational therapists, physiotherapists and radiologists. The nurse's role in public health promotion is set out in section 3.1 of the NMC Code (2018) which states that nurses must 'pay special attention to promoting wellbeing, preventing ill health and meeting the changing needs of people during all life stages'.

In response to the increasing concerns regarding preventable ill health PHE, the NHS and Health Education England (HEE) launched the 'Making Every Contact Count' (MECC) initiative in February 2010 to support healthcare professionals and others in delivering public health messages. To ensure national implementation of the initiative, Standard Condition 8 of the NHS Standard contract (2020) requires NHS service providers to develop and maintain an organisational plan to ensure that staff use MECC.

1.2 Background to the MECC Initiative and Behaviour Change

A national Consensus Statement for the MECC initiative (PHE, 2016a) states that MECC was devised '*to train and support organisations and individuals, including healthcare professionals, to use everyday interactions with patients/service users to promote healthy lifestyles and behaviours'*, and was developed in collaboration with National Institute for Health and Care Excellence (NICE), the Care Quality Commission (CQC), local authorities, PHE and the Royal Society for Public Health. It recognises that giving lifestyle advice can be difficult or unwelcome and it aims to provide a framework for not only healthcare professionals but non-specialist employees in service organisations such as hospital porters and customers facing Local Authority employees, who come into regular contact with members of the public, to make health promotion commonplace. The underlying philosophy of MECC is that any person, regardless of profession, background and role, can be trained to hold MECC conversations and that MECC applies at an organisational as well as individual level (PHE, 2016a). It aims to give people the knowledge, skills and confidence to initiate brief conversations and use behaviour change models to encourage individuals to address unhealthy behaviours.

PHE cite MECC as an evidence-based intervention (PHE, 2016a), which utilises opportunistic, short conversations to provide healthy lifestyle information, engage people in considering their health behaviours and to signpost people to services, resources and interventions that can help support their behaviour change. The MECC initiative aligns with the NICE guideline

(PH49) for individual approaches to behaviour change (NICE, 2014). This recognises that different approaches to behaviour change may be better suited to different health behaviours, but in any event the change needs to be sustained in the medium to long term for health benefits to be maintained. A MECC conversation is opportunistic and short in length with PHE (2016a) referring to them as a Very Brief Intervention (VBI) or a Brief Intervention (BI). These in turn are defined by NICE (2014) as:

- VBI- a conversation taking 30 seconds to a couple of minutes, whereby someone is given advice or is signposted to services, and may include raising awareness of risks, or providing encouragement and support for change

- BI-an opportunistic conversation, negotiation or encouragement, with or without written support or follow up, which may involve a referral to services and can be delivered by any person trained in the necessary skills.

Despite PHE's assertion that MECC is evidence-based and the fact that the initiative was launched a decade ago, there is no nationally standardised MECC model that organisations can implement and there remains a lack of clarity about what MECC entails. A quality checklist produced by PHE (2018) provides ten recommended core markers, which education programmes should incorporate, three of which relate to evaluation of the training provided, and the remainder lack any definitive guidance on how to implement MECC in practice. In the absence of a national standardised approach, two different approaches have developed independently, the Wessex model and the Yorkshire model, and these are used by many organisations, some of whom take aspects from each model to produce their own new hybrid approaches. The models are very different in the way they approach behaviour change, which introduces ambiguity, and thus the evidence-base for MECC relies on research from fundamentally different approaches, which leads to difficulties in assessing the effectiveness

of MECC. The Wessex model trains people in Healthy Conversation Skills (HCS), which use Open Discovery Questions (ODQ), such as 'What?' and 'How? to explore with a patient what barriers may be inhibiting them in changing poor health behaviours, rather than 'suggesting' or 'telling' them what to do. This model trains staff to help the patients to find their own solutions to address their problems and to help them to set goals using the SMARTER concept (Specific, Measurable, Action-oriented, Realistic, Timed, Evaluated and Reviewed) (Dewhirst and Speller, 2015). The Yorkshire model takes a more empathic and informative approach by using the 'Ask, Assist, Act' method, which is more based around 'suggesting' and 'telling' patients what they could do to improve health behaviours. Staff are encouraged to ask direct questions to identify a need for change, to provide information to the patient about their health behaviour and to actively signpost patients to available local services where they can get further help and advice.

1.3 MECC Local Context

1.3.1 Hybrid MECC Model in Lincolnshire

The MECC programme in Lincolnshire is a hybrid approach based around the Yorkshire model, with aspects of the Wessex approach, and concentrates on five core lifestyle areas: smoking, alcohol, obesity, exercise and mental health, with a further programme MECC Plus addressing wider determinants of health such as debt management, housing and welfare advice (PHE, 2018b). Obesity, mental health and exercise are considered as priorities in the county's strategy to promote healthy lifestyles according to the Joint Health and Wellbeing Strategy (Lincolnshire Health and Wellbeing Board, 2018). Latest figures show that the prevalence of overweight or obese in adults in the county (65.2%) (Lincolnshire Research Observatory (LRO), 2019a) are slightly higher than the national average (64%) (NHS Digital, 2019b) and adult inactivity is higher (25.2%) than the national average (22%). The prevalence of mental health and depression in the county is rising in line with the national figures (LRO, 2019b) and the prevalence of smokers in Lincolnshire (16.3%) (LRO, 2019a) remains higher

than the national average (14.4%). Alcohol consumption (more than 16 units per week) is slightly higher in the county (22.1%) (LRO, 2019a) than nationally (21%) (NHS Digital, 2019a).

Public health promotion aimed at addressing specific poor health behaviours is incorporated into Lincolnshire's Sustainability and Transformation Plan (STP) (NHS, undated). This includes a MECC objective, which aims to increase the numbers of trained MECC staff to 15,000 by 2020/2021 (no baseline data cited) and to provide up to date information and resources on best practice with the aim of embedding public health promotion into healthcare and non-healthcare organisational cultures. Training of staff and development of a network of 'MECC champions', personnel who promote on-going MECC principles within an organisation, is led by Lincolnshire County Council (LCC) (local authority with statutory responsibility for health). LCC have devised a training programme for Lincolnshire, in line with the national quality markers (PHE, 2018c), which is presented to a variety of healthcare and non-healthcare organisations across the county.

1.3.2 Hybrid MECC Training at the University of Lincoln

LCC's hybrid MECC training programme is delivered to undergraduate students studying nursing degrees at the University of Lincoln as part of the students' public health education. The students attend the LCC training in the second term of their first year of study, and the MECC concept is revisited and reinforced in modules via lectures, seminars, tutorials and clinical teaching throughout the three year degree course with the aim of enabling students to practice their learned skills in practice placements. Initial training comprises a half day plenary lecture by LCC, which provides information on the five core areas of health promotion and methods for applying MECC in practice. A further half day ('community day') is devoted to enabling students to talk with providers of signposting services at an exhibition attended by service providers.

1.4 The Theory-practice Gap

Alongside the MECC Consensus Statement (PHE, 2016a), PHE published an evaluation framework (PHE 2016b) intended to assist in assessing whether the MECC initiative is achieving its outcomes in terms of the processes, outcomes and impacts in practice. Studies on the MECC initiative are still emerging, particularly on the standards of training received, confidence of practitioners to implement in practice and perceived barriers to implementation. However, despite the requirement in the NHS Standard contract for staff members to use MECC, one recent study showed that 31.4% of healthcare workers across acute, tertiary, community and primary care settings including nurses, midwives, doctors, ambulance staff, allied health professionals and pharmacists, were unaware of MECC (Keyworth et al., 2018). Apart from lack of knowledge about MECC, research suggests that reasons for not delivering public health messages when opportunities arose include lack of resources and finances, lack of confidence and training, lack of knowledge of services, and time pressures in clinical situations (Charlesworth et al, 2019; Chisholm et al, 2018; Elwell et al, 2013). In addition there is anecdotal evidence to suggest that feelings of guilt or shame inhibit practitioners engaging in MECC, for example in Limmer and Thomas (2016), but this subject is rarely explored further.

An initial scoping search of the literature showed that there are very few studies regarding the role of nurses in MECC, and that many focus on the role of physiotherapists, General Practitioners (GPs), pharmacies, Children's SureStart centre staff and Local Authority workers. Since health promotion is part of the nurses' defined role according to the NMC, it could be expected that research regarding their training, implementation in practice, the effectiveness of the intervention and any barriers or enablers to having a MECC conversation would be available, but this appears not to be the case. Previous research on public health promotion by nurses largely focusses on prescribed behaviour change interventions, such as smoking and alcohol cessation services, rather than on the opportunistic conversations held during routine interactions, which characterise MECC (Keyworth et al, 2018; Aalto et al.,

2005). Research retrieved discusses the effectiveness of public health promotion in relation to the practitioners' own values and health behaviours and how this influences their actions in practice, but these do not relate to the MECC initiative. Results show that personal values and behaviours can both enable more empathic conversations, but also create barriers due to feelings of guilt about a person's own inability to implement the desired health behaviours in their own lives (Aranda and McGreevy, 2014; Brown and Thompson, 2007; Hidalgo et al., 2016; Kelly et el. 2017).

1.5 COM-B Model of Behaviour Change

NICE (2014) advocates the use of theoretical frameworks to underpin the design and evaluation of behaviour change interventions and encourages their use to inform the evidence base. It is considered that a behaviour change model could be used to investigate the values, experiences and behaviours of nursing students in their use of the MECC initiative. One model used in health behaviour change interventions, the Health Belief Model (HBM) covers many aspects considered to be integral to successful behaviour change (Skinner et al, 2015, 76). The model however does not account for a person's attitudes or beliefs and does not consider social opportunities including environmental factors or equality in access to information, all of which may encourage or inhibit behaviour change (Rubinelli and Diviani, 2020). Furthermore, whilst the HBM has been shown to be useful in predicting behaviour, studies show that the effects of implemented interventions tend to be small (Prestwich et al, 2017) and for these reasons this model was not used to address the research question. Another model considered is the Theory of Planned Behaviour (TPB), which is also used to explain behaviours and considers a person's behavioural intentions or motivations and their ability or behavioural control in making a change (Doll and Ajzen,1992). This theory, however, was not designed as a model for behaviour change or intervention (Prestwich et al, 2017), and a systematic review of the implementation of the TPB showed that though the model helped to explain intention to change a behaviour it was less able to predict actual behaviour (McEachan et al, 2011). The

TransTheoretical Model (TTM) is a stage-based model that considers five steps to behaviour change: pre-contemplation, contemplation, preparation, action and maintenance (Prochaska and DiClemente, 1983). The evidence-base for this model, particularly the premise that behaviour change falls into stages rather than considering that variables such as motivation are continuous, is limited (Prestwich et al, 2017) and this is a disadvantage making it less suitable for addressing the research question.

Michie et al's (2011) COM-B model of behaviour change is one model that NICE (2014) references and this asserts that a person's behaviours and actions are a result of an interaction between their capability, opportunity and motivation to make a change. A limitation of the model is that in comparison to other models, such as the TPB and the HBM, COM-B was developed relatively recently and research determining its validity and reliability is limited (Keyworth et al, 2020). Whilst relatively new, the COM-B model has been used to inform health promotion interventions (Chater et al, 2019; Keyworth et al, 2020; Kwah et al, 2019; Webb et al, 2016), and was developed based on the findings of a review of 19 existing behaviour change frameworks and incorporates all the factors that are known to influence behaviour change (Michie et al, 2011). COM-B does overarch common core elements from many previous models, including HBM, TBP and TTM (Michie et al, 2011) and addresses the aspects of behaviour change under investigation and it was decided that it would be an appropriate way of assessing behaviours in practice and in investigating nursing students' perceptions and actions around MECC in this research.

1.6 The Research Question

Research problems arise from a void in the current literature (Cresswell and Cresswell, 2018) and an initial literature search shows that there is a paucity of published primary research around MECC. Existing papers include qualitative research assessing training provision and the levels of competency and confidence to deliver MECC messages thereafter, and studies that on closer examination report on initiatives that fall outside the definition of MECC (Anokye

et al, 2014; Avery et al, 2017). There have been some studies investigating the perceptions and actions of healthcare and non-healthcare professionals in general but there appears to be few regarding the role of the nurse in MECC. Research regarding other public health interventions consider the individual's values, moral emotions and own health behaviours and how this affects their practice, but there appears to be no such literature relating to the MECC initiative. Evaluation of training provision around MECC often considers practitioners intentions to apply MECC in practice but few investigate whether training leads to a change in the numbers of MECC interactions in practice. This thesis aims to address the research question: Do the values, experiences, training and behaviours of student nurses impact their actions in the promotion of healthy lifestyles using a hybrid MECC initiative?

1.7 Research Aims

The research aims are as follows:

- To evaluate the student nurses' values and experiences around public health promotion before they receive hybrid MECC training.
- To evaluate whether the hybrid MECC training intervention received by student nurses influences their behaviours regarding MECC in practice.
- To investigate the experiences of nursing students in practice placement, including understanding how MECC is implemented and what are the enablers and barriers to holding conversations.
- To investigate whether student nurses' own values and health behaviours influence their MECC practice.

1.8 Chapter Summary

The introduction gave a background to the problems for health and social care in England from the increasing incidence and prevalence in avoidable illnesses as a result of peoples'

lifestyle behaviours. It discussed the MECC public health initiative, which aims to give people, regardless of their profession, background and role, the knowledge, skills and confidence to hold brief conversations to encourage individuals to address these unhealthy behaviours. The notion that there is no standardised approach to MECC and the differences in approaches that have emerged over the last decade was introduced. Delivery of MECC training in Lincolnshire was discussed including the hybrid training programme received by student nurses at the University of Lincoln. The research base for MECC was also introduced, including the void in literature relating to nurses' role in MECC and the limited research undertaken regarding whether peoples' values, moral emotions and own health behaviours effect their practice, and these are explored further in the review of the existing literature in the next chapter.

CHAPTER 2 : LITERATURE REVIEW

2.1 Introduction

This section sets out the strategy employed in the approach to the review of existing literature regarding the MECC initiative and details the findings of the literature review. A full systematic review was not undertaken, though a systematic approach to the literature review was employed as this helps to reduce the potential for selection bias and publication bias, and presents a clear approach to the methods used, which thus demonstrates rigour in the methodology (Booth et al, 2016).

2.2 Literature Review Strategy

2.2.1 Databases

A search was undertaken of the University of Lincoln library database, which accesses over 100 databases relevant to peer reviewed medical and healthcare publications. The database includes a searchable list of entries from different sources such as books, journals, articles and reports, and enables retrieval of publications using, for instance, keywords, phrases, titles and authors. Databases accessed via the University of Lincoln library relevant to this review include medical and nursing databases such as Medline, BMJ Journals, the Cochrane Library, CINAHL and EBSCO.

2.2.2 Search Terms

A systematic approach was used in the literature search. Keywords that identified the concepts relevant to the study were determined using the research question '*Do the values, experiences, training and behaviours of student nurses impact their actions in the promotion of healthy lifestyles using a hybrid MECC initiative?'*. The identified population under research i.e student nurses was extended to incorporate nurses and other public health practitioners

given the already noted paucity in the literature in general. The healthcare intervention employed i.e MECC and the personal attributes of the population under investigation i.e. values, experience and behaviours formed the other search terms.

In order to ensure that all forms and derivatives of the identified searchable words were retrieved, the following search terms were generated: nurs* OR public health OR health; "making every contact count"; and valu* OR experience OR behavio?r. The Boolean operator OR enabled the search to be widened to include synonyms of the search terms. The truncation operator * ensured derivatives of the keyword were identified, ? searched for different spellings of words and " " ensured all words in a phrase were included (Cronin et al., 2015). The results of the searches were then combined using the Boolean operator AND to produce more specific results (Jesson et al., 2011). The acronym "MECC" was incorporated in the first literature search, however it was found that it generated returns relating to at least sixteen other meanings for the term MECC used in other disciplines. The Boolean operator NOT was therefore used to remove irrelevant returns on these 16 meanings for MECC, however more than 10,000 returns were still listed. It was quickly noted that the acronym MECC was always preceded by a fully written term and it was therefore decided to use only 'making every contact count' in the search terms to restrict the search and provide relevant results.

2.2.3 Inclusion and Exclusion Criteria

Inclusion and exclusion criteria were used in the search strategy to focus the search and narrow the results to specifically answer the research question (Aveyard, 2014). The following inclusion criteria were used:

- Academic journals
- Studies in the United Kingdom

- English language documents as translation services were not available.

The following exclusion criteria were used:

- Not English Language

Table 1 shows the numbers of results retrieved during the search of the University of Lincoln library database.

Table 1: Results of the Literature Search

Search term	Number of results retrieved
Nurs* OR “public health” OR health	157,285,817
AND “making every contact count”	1,033
AND valu* OR experience OR behavio?r	748
Academic journals	468
English language	466
Duplicates removed	311
Title and abstract search	68
Main body text	33

2.2.4 Refining the Search

Having removed 311 duplicate entries, the remaining 68 papers were systematically checked and filtered by titles and abstracts, checking against the inclusion criteria and research question (Aveyard, 2014). The remaining 33 papers were read to determine the relevance to the research question.

2.2.5 Other Sources

In addition to the university database search, the documents cited by NICE and PHE as evidence for MECC were also read. The case studies and evidence pages on the makingeverycontactcount.co.uk website were also searched for research evidence of implementation and evaluation of the MECC initiative. Many of the documents retrieved were duplicates of the database search, however another 20 relevant documents were found, some of which were unpublished reports from organisational settings. A reference search of the journals retrieved, including grey literature, was also undertaken to ensure that all relevant documents were considered in the review.

2.3 Overview of the Literature

The literature review appeared to return a wide variety of documents related to the MECC initiative, but on close examination and refinement only a few documents were presenting primary research. There were many examples of editorial pieces, discussions around MECC and healthcare articles (Barley and Lawson, 2016; Bostock-Cox, 2015) that advocated the use of MECC in practice, referring to existing evidence, but providing no new information, insight or data. Some of these articles were from nursing journals that discussed the importance of the nurse's role in MECC and public health promotion, suggesting it's importance and providing advice on approaches to conversations, but not giving any substantive evidence of its use in practice by nurses (Bennett, 2015; Craig and Senior, 2018). Some articles retrieved were assessments of the training provision around MECC and the levels of competency and confidence thereafter (Percival, 2014). Qualitative research gathering views and perceptions of MECC in practice from practitioners and managers were retrieved, but few studies addressed outcomes in practice either from frequency of MECC conversations or long-term outcomes for patients (Donovan and Davies, 2016; Hart et al, 2018; Webster, 2018). It was also noted that much of the literature related to research around a variety of healthcare and non-healthcare professions and settings such as physiotherapy, radiography and other allied

health professions, pharmacies, GPs, local authorities and Surestart children's centres, but very few documents related directly to the role of the nurse in MECC (Baird et al, 2014; Pattinson and Jessop, 2016; Walkeden and Walker, 2015).

There appears to be confusion in the literature regarding terminology used in health behaviour promotion as Very Brief Interventions (VBI) and Brief Interventions (BI) were used interchangeably with Very Brief Advice (VBA) and Brief Advice (BA). Documents relating to the Yorkshire model were generally consistent in their use of BA in MECC conversations and this approach is used in Lincolnshire. The Yorkshire approach also considers that a BI is a longer consultation involving goal setting, monitoring and providing longer term support for behaviour change (NHS Yorkshire and Humber, 2010). This is at odds with the NICE guidance (2014), which considers VBI and BI to represent MECC interactions, furthermore other researchers found organisations using the terms Brief Intervention Advice and Brief Chats (Health Education West Midlands, 2013; Holden et al., 2016). This confusion also translated into practice as research on health promotion around physical activity by physiotherapists demonstrated uncertainty and confusion over terminology and what constituted MECC, motivational interviewing, brief advice or brief interventions (Lowe et al, 2018). For the purposes of this literature review, and despite confusion over terminology, all definitions were incorporated if the interactions described could constitute a MECC conversation.

2.4 Familiarity with MECC and Consideration of Roles

Given the requirement for NHS professionals to engage in public health promotion, according to their professional codes and standards, and the implementation of the NHS Standard Contract (NHS, 2020) for ensuring staff use MECC, it could be expected that experience of MECC in practice is widely acknowledged and utilised across services. An online survey of 1387 healthcare multi-professionals found however that on average awareness of MECC is

very low (31.4%) (Keyworth et al, 2018). This study found that GPs and ambulance staff were the least aware of MECC, but that nurses and midwives were the most aware. Across all healthcare professionals surveyed, more nurses and midwives reported that they had delivered MECC messages. The scope of the Keyworth et al (2018) study did not extend to exploring why awareness is low, but it is postulated that fear of offending patients, assumptions about patient motivation and lack of staff training may play a part. The latter was certainly found to be the case in a survey of 1016 Allied Health Professionals where only 28.1% reported having received MECC training, though a further 65.1% were keen to receive training (PHE and the Royal Society for Public Health, 2015).

The lack of a standardised approach to MECC training could be a contributory factor in some health professionals being confused about their role in health promotion. The underlying philosophy of MECC is that any person, regardless of profession, background and role can be trained to hold MECC conversations and that MECC applies at an organisational as well as individual level (PHE, 2016a). This was set out in one of the early frameworks for the Yorkshire model which stated that 'behaviour change is a function of the whole workforce rather than defined roles' (de Normanville et al, 2011). Pattinson and Jessop (2016) found that a sample of 108 radiographers generally accepted health promotion to be part of their role, but the same sample did not consider that it was their responsibility to implement it in practice. The reason reported for this behaviour was that participants felt that delivery of certain messages was the role of other professionals, for example oncologists advise on smoking cessation, suggesting that they misunderstood the concept that MECC should be used by any person who had received MECC training at every available contact. Understanding of roles in health promotion was also investigated by Walkeden and Walker (2015) who found that in their sample of physiotherapists, those in a supervisory or management capacity were aware of their roles and responsibilities, particularly in relation to smoking cessation and promotion of exercise. The physiotherapists at AfC Band 5, however, did not consider this to be part of their role,

despite health promotion being part of the pre-registration physiotherapy curriculum (Walkeden and Walker, 2015).

The role of nurses in health promotion is defined in the NMC Code (2018) and articles regarding opportunities, advice and information to motivate nurses to use MECC in practice regularly feature in nursing journals (Bennett, 2015; Craig and Senior, 2018; Forward, 2018). Other than the study by Keyworth et al (2018), which found that less than half of nurses surveyed were aware of MECC, there is a lack of robust studies exploring nurses' understanding of their role. Greenwood and Lewis (2015) interviewed six purposively sampled paediatric nurses about opportunistic health promotion with obese children and their parents. The study showed that the nurses agreed that health promotion was part of a nurse's role, but that they did not consider it their responsibility in the acute setting, and that it was the role of primary care professionals. Qualitative research commissioned by the Royal College of Nursing (Donovan and Davies, 2016) sought to gather the opinions of managers who are directly responsible for commissioning public health services around the role of nurses in MECC. They concluded that nurses are best placed to deliver public health messages because they are seen as care specialists, have local knowledge and are competent to do so, though no frontline nurses were interviewed nor evidence for these assertions defined (Donovan and Davies, 2016).

2.5 Primary Research and the MECC Evidence Base

The majority of published primary research relating to the Wessex model originates from the University of Southampton (Baird et al, 2014; Black et al, 2014; Dewhirst and Speller, 2015; Lawrence et al, 2016; Tinati et al, 2012). The Healthy Conversation Skills (HCS) training used in this model was devised by the University's MRC Lifecourse Epidemiology Unit and was first piloted in two NHS Trusts and one local authority (Dewhirst and Speller, 2015). A pre and post

survey of the HCS training evaluated staff perceptions, attitudes, values and behaviours, but did not investigate outcomes in practice. The recruited samples included allied health professionals, specialist nurses and occupational health personnel, local authority housing personnel and NHS staff from a minor injuries unit and heart failure and respiratory team. Results of the pilot showed that: at post-training evaluation staff intended to use Open Discovery Questions in future interactions rather than telling patients/service users to change behaviours; staff were slightly more confident post training but were no more motivated to have a healthy conversation; and there was little change in the frequency of healthy conversations (Dewhurst and Speller, 2015). The Dewhirst and Speller (2015) study also identified a barrier to the long-term sustainability of MECC from the availability of staff to attend the HCS training, which was not mandatory, due to workload and staff shortages.

An evaluation of Dewhirst and Speller's (2015) pilot study undertaken at a local authority, found that there were mixed views on the value of using HCS in the organisational context of a council housing team and that motivation amongst staff tailed off over time (Patten and Crutchfield, 2016). The qualitative study also was one of the few to mention the positive effects on staff's own health behaviours and their utilising the MECC skills outside of the work environment to speak to family and friends (Patten and Crutchfield, 2016).

Following the pilot study, the University of Southampton undertook a large non-randomised control trial at Surestart centres, where staff were trained in Healthy Conversation Skills around physical activity and diet. A series of papers presented the results of an evaluation of the training (Black et al, 2014; Lawrence et al, 2016), an evaluation of the intervention on outcomes for women at the Surestart centres (Baird et al, 2014); and identification of barriers to implementation of the health promotion intervention (Tinati et al, 2012). The evaluation of the training showed that staff were both more confident and competent to deliver Open Discovery Questions both immediately and 3 months post training (Black et al, 2014). The

same sample were reassessed one-year post training by observation of interactions in practice and they were more likely than non-trained staff to have created opportunities to have a healthy conversations and to ask Open Discovery Questions (Lawrence et al, 2016). After one year the trained staff were also less likely to 'give information' as per the Yorkshire model, which the authors consider is 'insufficient to change behaviour' since the clients need an open style of communication to be motivated and empowered to change. The Wessex approach is based on the understanding that knowledge alone is insufficient to elicit a behaviour change and that motivation is also needed (Lawrence et al, 2016), though all of the research relating to this approach centres around the Surestart personnel and there appears to be no research on nurses use of this model.

Whilst the results of the evaluation of the MECC Surestart training programme showed positive results immediately and up to one-year post training, an evaluation of the effects on outcomes for the Surestart clients showed that the intervention did not improve the women's diets and physical activity levels (Baird et al, 2014). The authors conclude that a single healthy conversation is unlikely to elicit positive behaviour change and that prolonged exposure to the HCS conversation may be necessary if the intervention is to provide positive effects for clients. This conclusion is contrary to the results of a Cochrane review (Kaner et al, 2018), cited by NICE (2014) as evidence for behaviour change, which looked at the effects of interventions on alcohol consumption. This concluded that in the primary care setting repeat interventions (up to five consultations) and long consultations up to 60 minutes, had little or no more benefit in terms of quantity and frequency of alcohol consumption compared with brief inventions (typically 5-15 minutes).

Updated evidence for PH49 Recommendation 9 from NICE (2017), cites an evaluation of the Yorkshire model undertaken by Nelson et al (2013), which was largely concerned with the perceptions of MECC by 12 managers/directors and public health specialists. This states that

‘MECC has considerable potential for changing staff behaviour in relation to promoting health enhancing behaviour’ (Nelson et al, 2013; 653) and is based on interviews with nine NHS employees, one local authority employee and two from the private sector. Nelson et al (2013) however acknowledge that the research was carried out at a time when similar health promotion strategies were being undertaken and it was noted that implementing MECC aligned with existing strategies. It was also noted that the generally positive responses to the initiative and absence of negative accounts ‘*may reflect a bias in the participants who were interviewed’* and that the findings of the ‘*exploratory study’* are ’*tentative and only give limited indications of the potential of MECC’* (Nelson et al, 2013; 659-660). The research does not include any quantitative data, though one manager reported a 70% increase in uptake of smoking cessation services following staff training in a ward environment, but this is not evidenced.

Evidence for brief advice/interventions relating to weight loss are presented in two separate pieces of research (Avery et al, 2017; Aveyard et al, 2016). An intervention to refer overweight customers to Slimming World via Healthy Living Pharmacies and via a GP showed a positive outcome in terms of weight loss for both groups of people, though the route of referral was shown not to be significant (Avery et al. 2017). This initiative is referred to as a MECC intervention specifically for people meeting several criteria including BMI>25. It is unclear however how patients were identified by the Healthy Living Pharmacies, and this has implications regarding whether this is truly an opportunistic MECC initiative or a more targeted intervention where clients are weighed to see if they meet the criteria. A more robust randomised control trial at GP surgeries by Aveyard et al (2016) is one of the few studies undertaken that quantifies outcomes for patients from a MECC intervention. In this study a GP assigned overweight patients to either receive an offer of referral to a weight management group or receive advice and information around how weight loss would benefit their health (Aveyard et al, 2016). In both instances the interactions could be considered to be a MECC

conversation as the sample groups received interventions that were <30 seconds long and were most aligned with the Yorkshire model of 'ask, assist, act'. Uptake for the weight loss group was high with 77% of people who were offered the service attending the group. The results showed a positive effect from MECC on patient health behaviours for both sample groups, as both benefited from weight loss after one year, though the average amount of weight lost was greater for the patients attending the weight loss group.

Strong evidence of the effectiveness of opportunistic (<10mins) BA on smoking cessation is provided by a systematic review by Aveyard et al (2012). This showed that increases in quit attempts and quit success were seen in studies where there was delivery of either BA or 'BA with some assistance', whereby BA was supplemented by the offer of either behavioural support strategies or nicotine replacement therapy. Studies included in the review were all related to GP consultations and there were no instances of studies carried out in secondary care, or by other health professionals, including nurses. The Aveyard et al (2012) study also concluded that there was no evidence to suggest that assessing a person's willingness to change prior to the intervention was warranted, though Percival (2013) considers that this is a key requirement in the effectiveness of MECC. Further evidence for MECC relating to smoking cessation cited by PHE (2016) includes examples from NHS settings where MECC had been implemented and referrals to smoking cessation services have increased. It was acknowledged however that these studies were undertaken in the period 2010-2013 when MECC was a CQUIN (Commissioning for Quality and Innovation) at either a national or local level for at least part of the time (Health Education West Midlands, 2013). CQUIN is a payment framework that stipulates contractual conditions on the payment of funds commensurate with performance in relation to specified quality service improvement targets (Berkshire West Clinical Commissioning Group, 2020). The studies cited by PHE (2016) tended to be small scale, non-randomised observational studies undertaken within individual NHS departments in response to the CQUIN framework. The imposition of the CQUIN financially incentivised

and auditable quality standards must therefore be considered as a confounding factor in the reported improvements in referrals to smoking cessation services and this therefore undermines the evidence cited by these studies.

2.6 Evaluation of the Training Provision

A proportion of literature retrieved pertains to evaluating MECC training provision, which is part of the process evaluation of PHE's evaluation framework (PHE, 2016b). Gathering data on the content and value of training provision is mentioned in numerous documents (Hall et al, 2019; Hart et al, 2018; Lawrence et al, 2016) and this may be a reflection of the fact that it is comparatively easier to gather data via questionnaires, feedback and interviews following training than to gather data from practice and regarding patient outcomes (Chisholm et al, 2018).

The benefit of MECC training and the value to practice was occasionally reported, and Webster (2018) found that paediatric doctors and nurses' consideration of the importance of MECC improved from 57% to 75% post-training. Training in the Wessex model was also valued by the majority of the Surestart participants who felt the course content would be useful in practice (Lawrence et al, 2016). Again there is limited research relating to nurses' opinions on the value of MECC, but one study involving student midwives concluded that the participants understood the importance of the behaviour change training (not specifically MECC) they had received and recognised its application to practice (Hart et al, 2018). The idea that MECC should be part of the core mandatory training for NHS staff was also suggested by the managers interviewed by Chisholm et al (2018).

Confidence of attendees pre and post training features in the literature with varying results. Dewhirst and Speller's (2015) Wessex MECC pilot found that participants were only slightly

more confident post training and Webster (2018) reported a decrease in confidence amongst paediatric nurses and doctors after training, despite them reporting having more knowledge. Black et al (2014) however found in their evaluation of their training in healthy eating and physical activity using the Wessex model resulted in improved confidence and competence immediately following the course, and Hall et al (2019) similarly reported improved confidence in alcohol conversations amongst pharmacy staff.

As well as the content of MECC training being non-standardised, the methods of delivery also varies considerably. Holden et al (2016) found that some organisations rely solely on providing an eLearning package for staff and some use a system of training key personnel to cascade train within an organisation. E-learning is an accepted method of MECC training, however since it requires communication skills it should be combined with face to face training to best equip staff with the practical skills required for the task (Health Education England, 2020). Limmer and Thomas (2016) found that staff preferred face to face training over e-learning, and where training courses were provided the duration varies from a few hours to several days, though often there were organisational problems with releasing staff to attend courses (Holden et al, 2016).

2.7 Evaluating Translation of Training into Practice

The PHE (2016b) MECC evaluation framework includes measures for evaluating the outcomes of MECC in practice, including gathering data on: organisational readiness to implement MECC; MECC interventions delivered in practice; signposting and referrals made to services; and numbers of people reporting health behaviour changes. Published data on evaluation outcomes however are scarce and this may in part be attributable to the complexities and difficulties in recording brief conversations and hence evaluating delivery and any impacts of any intervention (Chisholm et al, 2018). Since there is no standardised

method of recording MECC interactions it is easy to see why research in this area is lacking. Mulroe et al (2017) undertook a pilot study in primary and secondary care settings to assess the feasibility of recording MECC interactions and patients' health risk factors including obesity, alcohol consumption and smoking. They found that records were made for only 18% of patients attending the settings and that there were many practical obstacles to this including time and workload, but notably staff willingness to engage with the project.

Further issues with evaluating MECC in practice also stem from the evident confusion over what constitutes a MECC interaction (Lowe et al, 2018) and consideration that some job roles in the healthcare setting e.g. healthcare support worker, receptionist and porter would never involve formally reporting delivery of a MECC message under the current models. Evaluating the effect of MECC on outcomes for patients i.e. the numbers of people reporting a health behaviour change will also take time to come to fruition, which inevitably requires resources to investigate. Any studies would also need to be robust and consider that any outcomes and effects noted may be influenced by unknown confounding factors (Chisholm et al, 2018).

The literature review found that evaluations of staff behaviours in practice following health promotion training were infrequent and generally generated from qualitative research (Donovan and Paudyal, 2016), which produces unmeasured and subjective data. Limmer and Thomas (2016) undertook a quantitative evaluation of the implementation of MECC in practice via a survey of NHS staff following MECC training. The sample of 563 personnel worked in the same NHS Trust, though their job roles were not defined, and had received training mostly via e-Learning (95%) or via two hours of face to face training (5%). Following training, Limmer and Thomas (2016) reported that 68% of the sample had held a healthy conversation, though there were no statistics given for pre-training levels with which to compare the effect of the training. Moss and Bancroft (2019) reported a 70% increase in signposting to a local exercise scheme by physiotherapists, though no statistics are supplied regarding the sample or the pre

and post training figures, thus it is difficult to ascertain the relevance of this finding to the evidence base. An evaluation of the health topics that staff were prepared to discuss with patients varied according to confidence and profession e.g. physiotherapists likely to discuss physical activity (Walkeden and Walker, 2015), though it was also found that some practitioners reported not evaluating the change in their health promotion activities post training at all (PHE and RSPH, 2015).

The literature review revealed that many sources reported on the barriers experienced and perceived by trained staff in putting MECC into practice. Many cited time as being a significant barrier to holding a MECC conversation (Dewhirst and Speller, 2015; Tinati et al, 2012; Walkden and Walker, 2015; Limmer and Thomas, 2016) and many reported concerns around alienating or receiving negative responses from patients (Charlesworth et al, 2019; Limmer and Thomas, 2016; Tinati et al, 2012). Despite receiving training, lack of knowledge (including of signposting services) also featured regularly in staff's justification of their behaviours (Hebron et al, 2016; Pattinson and Jessop, 2016; PHE and RSPH, 2015). Two papers also identified that staff experienced problems in the community pharmacy setting around lack of space and privacy to hold MECC conversations (Donovan and Davies, 2016; Hall et al, 2019). Issues around culture and systems influenced staff behaviour and several authors refer to MECC not being embedded in practice (Chisholm et al, 2018; Lowe et al, 2018), whilst Walkden and Walker (2015) also noted that a small sample of physiotherapists expressed that they did not practice health promotion as they were concerned about the lack of evidence for it. Lowe et al (2018) also reported that physiotherapists saw their advice around physical activity as restorative, short term goals to improve mobility based around the presenting condition rather than longer term behaviour change for health promotion.

An innovative attempt to prepare patients for behaviour change at a physiotherapy outpatients department is presented by Harris et al (2019). The strategy involves the sending of new

appointment letters and check in procedures preparing patients for a new assessment of BMI during the consultation, but the initiative is yet to be evaluated.

2.8 The Influence of Personal Values and Behaviours on Practice

The personal values, health behaviours and moral emotions of health professionals and the effects on their health promotion practice have been investigated in relation to health promotion in general (Aranda and McGreevy, 2014; Brown and Thompson, 2007; Hidalgo et al., 2016). Brown and Thompson (2007) investigated nurses' body size and their health promotion practice and found that 14 out of 15 primary care nurses were conscious of their own body size when talking to patients about obesity. Overweight or obese nurses gave conflicting evidence about the impact of their own behaviours on their practice, reporting they could be more empathic even though they were poor role models, and nurses with a low BMI also found conversations difficult through worries about appearing to lack empathy or authenticity. With respect to opportunistic health interventions characterised by MECC there are few studies or note. Limmer and Thomas (2016) reported that MECC trained personnel felt their own unhealthy behaviours were barriers to holding conversations. Kelly et al (2017) undertook a systematic review of literature regarding the influence of nurses' personal health behaviours on the delivery of all types of health promotion activities, however most did not align with MECC. In general, however they showed that personal alcohol consumption, physical activity levels and weight did not influence their actions in practice, though nurses who were smokers experienced guilt and tended to avoid smoking cessation conversations (Kelly et al, 2017).

The negative emotions guilt and shame influence our decision making and behaviours (Tangney et al., 2007). In order to experience shame or guilt the individual must first understand that they have erred in some way but the distinction between the two emotions

are frequently confused and the terms are used synonymously including by clinicians (Tangney et al., 2007; Baldwin et al., 2006) and this was found to be the case in the literature retrieved. Whilst the two emotions do have similarities, shame involves a direct evaluation of the self and the negative emotions associated with this include embarrassment, humiliation and feeling ridiculous, whilst guilt is more associated with a behaviour that causes one to consider the effect on others (Tangney et al, 2007).

Baldwin et al (2006) found a correlation between the negative moral emotion shame and an individual's self-efficacy- their belief in their own ability to undertake and succeed in a course of action– and Bandura (1995) proposes that self-efficacy influences how a person feels, motivates themselves and acts. If moral emotions can influence decision making processes and contribute to regulation of behaviours (Shen, 2018) it is important to understand if and how this affects the delivery of MECC generally.

2.9 Chapter Summary

The chapter presented the strategy for the literature review and summarised the literature retrieved. It demonstrated that published literature includes numerous commentaries on the importance of MECC but there is limited research to date that provides evidence for the MECC initiative in practice. The review showed that healthcare workers had low awareness of MECC and that the role of nurses in MECC is under researched, with the majority of primary research relating to other health professions and non-health job roles. It also showed that the retrieved research concentrates on aspects of MECC that can easily be measured e.g. perceptions of the initiative and the quality of training received, rather than variables that are difficult to measure such as changes in health behaviours.

CHAPTER 3: METHODOLOGY

3.1 Introduction

The methodology section sets out the research design, the methods used for collection of qualitative and quantitative data and the subsequent analysis. It also sets out the ethical considerations for the research.

3.2 Research Approach

3.2.1 Overview

In seeking to address the research question for this study, *Do the values, experiences, training and behaviours of student nurses impact their actions in the promotion of healthy lifestyles using a hybrid MECC initiative?*, the philosophical worldview, research design and methods must be considered in determining the overall research approach (Cresswell and Cresswell, 2018) and these are considered further in this chapter.

3.2.2 Philosophical Worldview

Scientific research is based around a set of theoretical perspectives (worldviews or paradigms), which provide a framework for interpreting observations and shaping the research approach (Cresswell and Cresswell, 2018; Bowling, 2014). Traditionally research was either: positivist, which is objective, empirical and used to verify theories; or constructivist, which is subjective, inductive and generates theories. More recently the pragmatic worldview has become recognised as beneficial in social research methods (Morgan, 2007) as it orientated in real-world practice and is therefore relevant to the research question regarding MECC perceptions and actions amongst nursing students. Pragmatism considers the research question and all the available approaches to understanding the problem, rather than focussing solely on the methods. It also considers the inference that can be gained from the research

data, which historically were context driven by the qualitative approach or generalisable from the quantitative approach (Morgan, 2007). Pragmatism however considers how the knowledge can be transferred to other settings and this has relevance to the transferability of the findings to other settings where MECC training is delivered.

3.2.3 Research Design: Mixed Methods Approach

The mixed methods approach is informed by the pragmatic worldview and is not subject to one system of philosophy, thus allowing different methods, assumptions and ways of data collection to be utilised to address the research aims. Mixed methods research involves the collection of both quantitative and qualitative data, the integration of which can provide additional insight beyond that provided by either source of data alone (Cresswell and Cresswell, 2018). The collection of data via two different, and opposing methods however, requires consideration in the research design particularly how the data can be meaningfully integrated to address the research question.

The research question lends itself to a quantitative component whereby the student nurses' perceptions, actions and values can be statistically analysed to determine any correlations or significance in the data including comparison between different groups. The quantitative data will not however add any information regarding why nurses hold those values and perceptions or why they act in a certain way, and the qualitative methods are designed to add insight and enrich the data (Creswell and Cresswell, 2018). A mixed methods approach can enhance validity, since the methods allows for alternative interpretations of the data, and the complementary nature of the two approaches can mitigate the limitations of a single approach (Polit and Beck, 2017).

A fixed mixed methods design, where methods are predetermined and planned at the start of the research (Cresswell and Plano Clark, 2011) was used due to limitations of time and access to the participants. Collection of the two datasets was independent and undertaken concurrently due to these limitations and therefore any emerging results from either the qualitative and quantitative research components did not influence the method of data collection of the other. This convergent mixed methods design assumes that the datasets produce different types of information that can be mixed at a specified point of interaction (Creswell and Cresswell, 2018) and in this research the data lend themselves to mixing of the two sources at the interpretation stage. It is acknowledged that the quantitative component of the research requires a large sample to ensure that statistical analysis is meaningful, whereas the small qualitative sample is determined by the need to gather more in-depth information. The large difference in sample size of the two datasets therefore determines the primacy of the quantitative research in the interpretation of the research findings, as this method yielded a larger proportion of the data retrieved.

3.3 Quantitative Methods

3.3.1 Questionnaire Development

Three questionnaires were used in the research, one validated questionnaire and two devised with the aim of providing data to address the research question, and all questions asked were relevant to the research aims (Bowling, 2014). Questions were developed to collect demographic information about participants, which could be used for stratification of the sample according to: age (18-24 years, 25-34 years, 35-44 years, 45-54 years, 55+years); number of years of healthcare experience (less than one year, 1-2 years, 2+ to 5years, 5+ to 10years, 10+years); and the participants nursing field (adult or mental health). The response sets for the demographic data were mutually exclusive to ensure participants could not provide more than one response for each question (Grove et al., 2015). Collection of the demographic variables was of interest to the research in evaluating whether age and/or experience

influenced participants values and their perceptions of MECC and/or their behaviours in practice. Similarly it was considered that data from the mental health and adult nurse students, all of whom had received the same hybrid MECC training, could be used to compare any similarities or differences in values and behaviours in practice.

The three questionnaires used to answer the research question were as follows:

- MECC-RS was devised and uses the COM-B model of behaviour change (Michie et al., 2014) to evaluate students' perception of their own capability, opportunity and motivation and actions in relation to delivery of MECC messages;
- Personal Patient Perception Scale (3PS) was devised to evaluate whether respondents are aware of psychological processes such as shame and guilt when engaged in clinical encounters; and
- PFQ-2(a) validated questionnaire, which evaluates feelings of guilt and shame (Harder and Zalma, 1990; Harder et al, 1993).

The MECC-RS and 3PS questionnaires were devised specifically to address the research question and therefore are non-validated. In order to improve validity a process of piloting the questionnaires was undertaken and this is discussed further in section 3.3.2.

All of the questionnaires were designed to be easy to read and included light shading to denote different lines and columns to reduce missing data or duplication (Bowling, 2014). The content, shading, print layout, use of colour and font size were all developed over four questionnaire versions to make the document more aesthetically pleasing and to help maintain participants' cooperation in completing the questionnaires (Oppenheim, 1992; 122).

Pre-coded, closed questions were used throughout as these are quicker and easier to answer thus enabling more questions to be asked in a shorter amount of time (Oppenheim, 1992; 114) and reducing the effects of careless or random responses as a result of waning attention and survey fatigue (Meade and Craig, 2012). All questions were designed to be clear and unambiguous, avoiding double questions and leading questions (Grove et al., 2015).

The MECC-RS questionnaire was devised to utilise a dual scale format, which allows two sets of responses to each questionnaire item (Pedder et al. 2010; Procter, 2013) i.e. perceptions (capability, opportunity and motivation) and actions. Subject areas were grouped together in MECC topics; smoking, obesity, alcohol, exercise and mental health, with three questions per topic. For the perception scales, response sets were either negative=0 or positive=1 for each perception e.g. capability responses were either 'I do not have the skills to so this' or 'I feel I am sufficiently skilled to do this'. Action responses were based on a Likert scale 0-3, ranging from 0 = 'I rarely/never do this' to 3 = 'I frequently do this'.

The 3PS questionnaire was designed to incorporate frequency response choices regarding psychological processes in response to a statement concerning MECC conversations. It uses a Likert scale 0-4 to ascertain whether students experience the feelings stated, with frequencies ranging from 0 = 'never' to 4 = 'absolutely every occasion' for questions 1-2 and 4-6. Counterbalancing was included in question 3 to reduce pattern response, whereby 4 = 'never' and 0 = 'absolutely every occasion'.

The validated Personal Feelings Questionnaire PFQ-2(a) (Harder and Zalma, 1990) was used to assess an individuals' feelings of guilt and shame whilst delivering a MECC message. This questionnaire uses the Likert scale based on agreement responses, where 0 = 'I do not experience this feeling' to 4 = 'I experience this feeling very strongly'. This questionnaire lists

feelings that are attributed to the moral emotions of guilt or shame, and the responses produce a 10-item shame subscale and a 6-item guilt subscale.

3.3.2 Pilot Studies

When collecting quantitative data using questionnaires, McColl et al (2001) advocate a process of piloting and pretesting particularly where untested or non-validated questionnaires are used. This process helps to ensure content validity and can indicate the need for re-wording, reformatting and other refinements. The pilot sought to test cognition to try to ascertain whether participants understood what they needed to do to complete the three questionnaires, whether there were any aspects of the questionnaires that were unclear and to identify poor compliance and missing data (Grove et al., 2015; Bowling, 2014). This is particularly important when using closed questions in self-completion questionnaires as there is no opportunity for further feedback from respondents (McColl et al., 2001). In addition, the pilot served to establish the time taken to complete the questionnaire, which helped to inform future administration of the data collection sessions (Grove et al, 2015).

As two non-validated questionnaires written specifically to address the research question were being used, a pilot study was conducted. The participants in pilot studies should be as similar as possible to the research group in question (Oppenheim, 1992) and therefore pilot questionnaires were distributed to newly qualified nurses on preceptorship programmes at the local NHS Trust, all of whom had recently graduated from a nursing degree programme. A copy of the pilot questionnaire is given in Appendix 1. Five questionnaires were returned and based on the observed compliance and feedback received (Appendix 2) amendments were made to the questionnaire. Reported completion times ranged from 5 to 15 minutes and the following changes were made to the questionnaire:

- MECC-RS: Action scale reduced from five responses to four to remove the neutral/uncertain response, and the wording of the responses was made clearer.
- MECC-RS: Headings added to each group of three questions to improve comprehension, and transcription error corrected.
- 3PS: number of responses reduced, and shading added to make questionnaire clearer to complete.
- 3PS: Reference to Likert scale removed to avoid confusion.
- PFQ2(a) page reformatted to make it clearer.

A copy of the final questionnaires is given in Appendix 3.

3.3.3 Sample and Recruitment

First year adult and mental health nursing students at the University of Lincoln provided the sampling frame, with cohort sizes of 191 and 29 respectively. In order to try to maximise response rates, consideration was given to different methods of distribution of questionnaires including: mass emailing to the students; invitation to attend a voluntary session; or presentation of the questionnaires at a timetabled session. Research shows that response rates from email surveys is generally lower than for paper-based questionnaires (Ebert et al., 2018; Konsved et al., 2007), and it was expected that attendance rates would be higher at mandatory rather than voluntary sessions. A group administered questionnaire was therefore chosen to maximise response rates, enable assistance with completion (non-directed) to reduce non-compliance and missing data and to ensure all participants had the same time for completion (Oppenheim, 1992: 103).

Data were collected at two time points: before hybrid MECC training; and following training and a placement in nursing practice to investigate any effects of the training received on the students' nursing practice. One week prior to both organised sessions, information regarding

the questionnaires and an invitation to participate were distributed via the University of Lincoln Blackboard (the virtual learning environment to which all students were enrolled), as advanced notice can improve response rates (Oppenheim, 1992). Included with the Blackboard post were copies of the consent form for the study (Appendix 4) and a Participant Information Sheet (PIS) which gives details about the study and ethical considerations (Appendix 5).

3.3.4 Distribution of the Questionnaires

The first round of questionnaires pre hybrid MECC training, was distributed at the start of a timetabled mandatory lecture for both cohorts. Both the PIS and the questionnaire had references to MECC removed and replaced by 'public health promotion' to avoid confusion to those students who did not understand the MECC concept.

Collection of the second round of questionnaires for the adult student nurses occurred during a three-hour session where students were required to attend to hand in university documentation for sign off. Students were at liberty to attend at any time during the three-hour session and after signing in they were asked if they wished to complete the questionnaires. For the mental health student nurses, completion of the round two questionnaires was undertaken during a mandatory training session due to time constraints, but time to complete the questionnaires was not allocated and the students therefore had to complete them in their own time.

The questions in the round two questionnaires were exactly the same as previously, to ensure that any changes in attitude could be directly measured (McColl et al., 2001), with the addition of one question asking the location of the students' placement, which was incorporated to contextualise student's opportunities for delivery of MECC messages.

At both sessions, consistent administration of questionnaires was considered important to eliminate/reduce variability and to improve validity of the data (Grove et al., 2015). At the first lecture session this was achieved by a PowerPoint presentation to explain the purpose of the questionnaires and to provide details on how to complete them (Appendix 6). As the adult nursing students' attendance at the second session was ad hoc, the researcher gave a shortened presentation to individual or small groups of students to remind them how to complete the questionnaires. At both times the researcher was available to answer any questions that arose. For the second session with the mental health students, a staff member who had received a briefing, gave a short presentation, distributed and collected the questionnaires. To further improve validity all participants were required to complete the questionnaires during the allocated sessions and leave them for the researcher to collect, rather than allowing participants to take the questionnaires away to fill in at a later time (Grove et al., 2015).

3.3.5 Data Management

On completion of the first round of questionnaires, each respondent was assigned a unique identification code, which was used to pair the data entries with the second round of completed questionnaires to enable pre and post training data analysis. All paper questionnaires and computer files were stored securely in locked cabinets and on the University of Lincoln secure network respectively in compliance with the University of Lincoln Research and Data Management Policy (2018b) (Appendix 7).

3.4 Qualitative Methods

3.4.1 Focus Group Development

Focus groups are a way of collecting qualitative data from a small group of people via informal discussions and are a good method when trying to elicit people's understanding, views and

opinions (Wilkinson, 2015) and were used here to enrich the quantitative data. They enable individuals to present their own views and experience, listen to other viewpoints, seek clarification and reflect on the discussion, thereby enabling a focussing in on their own thinking (Finch et al., 2014).

In order to ensure the focus groups were conducted in the same way and to ensure all administrative points were addressed a Focus Group Schedule was developed for the researcher to follow (Appendix 8). This included a set of 'ground rules', which were read out to: make clear the aims and purpose of the research; revisit ethical considerations including ensuring personal and sensitive data were not discussed outside the context of the groups to respect and ensure confidentiality; and gain permissions for audio recording of the interviews.

The Focus Group Schedule (Appendix 8) also included a list of discussion points with prompts, which were developed and revised to ensure that the content would enable participants to provide data to answer the research question. Focus groups and interviews were conducted in pre-booked university rooms to ensure that there would be no disturbances and the discussions followed the following format:

- Stage 1 – Introduction to research and researcher and explanation of ground rules.
- Stage 2 – Start of audio-recording. All discussions commenced with an opening question designed to introduce participants to the group and to gain some background information on their nursing placements to help provide context for the discussions. The researcher creates a spatial diagram at this point with names to aid the discussions.

- Stage 3 – Introductory questions are asked to open the topic and to engage as many participants as possible to start thinking about their own understanding of the MECC topic.
- Stage 4 – Main discussion exploring the topic using the Focus Group Schedule to help with questions, discussion points and prompts. Researcher ensures that there is a balance in contributions.
- Stage 5 – Summing up and ending the discussion and turning off the audio-recording.

3.4.2 Sampling and Recruitment

The sample groups were 2nd year adult and mental health nursing students, with cohort sizes of 146 and 38 respectively. These groups were selected as they had all received the same hybrid MECC training as the quantitative sample in their first academic year and had all had the opportunity to put their knowledge into practice during three nursing placements. Preliminary dates and times were organised to fit around the students' timetabled sessions in university to try to maximise responses. An invitation to participate in the research was then posted on the cohorts' Blackboard asking for volunteers to respond via email if they were willing to attend any one of the scheduled times for the focus groups.

All respondents were then emailed a consent form and a PIS detailing the format of the session and a date and time to attend a focus group. Seven adult nursing students responded in total, but due to university timetabled sessions were unable to attend as one group. Two group sessions were held with three students and two students in attendance. Two further respondents, who were unable to attend the scheduled sessions, were contacted directly and arrangements were made to undertake one-to-one interviews in order to capture as much data as possible. The one-to-one interviews followed the same questioning format as for the focus groups to maintain consistency. No mental health nursing students volunteered to participate.

3.4.3 Data Management

The audio files of the focus group discussions and interviews were carefully transcribed verbatim to Word documents by the researcher and an assistant. In order to ensure that the transcripts of the recordings were accurate and reflected the discussions held (Polit and Beck, 2017), the Word documents were proofread and checked against their respective audio files by the researcher. Any errors noted were amended.

3.5 Ethical Approval and Ethical Considerations

3.5.1 Ethical Approval

An application for ethical approval was submitted to the University of Lincoln Human Ethics Committee prior to commencement of the research. Following ethical review, approval was received, and a copy of the favourable opinion letter dated 25 February 2019 is given in Appendix 9.

3.5.2 Ethical Considerations

All student nurses who were eligible to participate in either the qualitative and quantitative components were clearly informed of the purpose of the research both verbally and via Participant Information Sheets. They were clearly informed of their right not to participate. For those students who volunteered to participate, informed consent was gained and their right to withdraw from the research up until the point their data were anonymised was explained to them.

In order to uphold participants' rights to confidentiality, including participants in the pilot study, all data contributions were anonymised to ensure that participants were not identifiable to others. Collection of the questionnaire data initially required identification of participants and

assignment of an ID code to enable comparison and evaluation of the first and second responses. After this point participant data were anonymised. Focus group participants were informed of their duty to maintain confidentiality of all group participants.

Data were stored and managed in compliance with the University of Lincoln Research and Data Management Policy (2018b). In addition, all participants were informed about and required to consent to the use of the anonymised data in the production of reports, presentation material and articles for publication according to the University Code of Practice (2018a).

3.6 Quantitative Data Analysis

3.6.1 Overview

Data from questionnaires were input to SPSS version 25 for Windows (IBM, undated) to enable statistical data analysis. The data were input by one researcher and any missing data were assigned with '99' to denote an omission and thus ensure that SPSS did not process the entry in the statistical analyses (Knapp, 2017).

Using the assigned unique ID code, pre and post questionnaires were matched to enable paired analysis and 137 participants completed both questionnaires. The pre and post data were input as one-line entry for each participant and only entries with two completed questionnaires were used in the data analysis. In addition, the free-text information gathered on the second questionnaire regarding student placements were categorised and input according to 9 placement types as follows: medical ward, surgical ward, community, outpatients, elderly/dementia, children, learning disabilities, A&E, palliative care. During data analysis it became apparent that obtaining data regarding the students' first practice placement prior to hybrid MECC training would contextualise the data. At this point, placement

data were obtained from the university database in line with ethical approval processes and were categorised and input according to the nine placement types above. All student placements were undertaken in Lincolnshire or Nottinghamshire for local NHS hospital, community health or mental health trusts or charitable organisations.

On completion of data inputting, the data files were independently quality checked by another researcher, using random number selection to identify 5% of the entries. No errors or omissions were noted.

To enable statistical analysis, variables were amalgamated using the 'SUM' code in SPSS to provide data on overall scores for capability, opportunity, motivation and action, and overall scores for the 3PS questionnaire were also calculated.

3.6.2 Tests for Normality

Tests for normality were undertaken to assess whether statistical analyses should entail parametric or non-parametric testing. All variables were assessed to check the H_0 All data are normal, according to the following assumptions (Field, 2014):

- Variables were dependent and continuous
- Observations were independent of one another
- Dependent variables were normally distributed, determined by: skewness<0.8; Kurtosis<2; Shapiro Wilks test >0.5; visual look at histograms to assess if samples follow the normal curve; Q-Q plot shows samples which lie on a straight line
- Dependent variables did not contain any outliers

In addition, the assumptions were used to assess the matched pairs of pre and post-training variables by testing the normality of distribution of the differences between the variables.

Whilst some of the variables, and differences in matched pairs, met all of the assumptions for normality, some exhibited outliers or did not meet the Shapiro Wilks test, others showed non-normal histograms and some Q-Q plot plots did not lie close to the straight line, which is indicative of a non-normal distribution. Field (2014) considers that for large samples (a large sample is not defined), tests for normality are not required since sample distribution will be normal regardless of the population. Statistical tests on the whole sample (n=137) may therefore not require normality testing. This does not translate however to testing on smaller samples within the population e.g. testing the effects of age where sample sizes ranged from 10 to 68. For continuity of testing therefore it was decided that the variables would be treated as non-normal throughout to allow comparison of results.

3.6.3 Statistical Analysis

Based on the non-normality of many of the variables, non-parametric testing was undertaken throughout. In order to compare paired samples pre and post-training, the Wilcoxon paired-rank test was undertaken as this is a viable alternative to the parametric paired sample t-test (Knapp, 2017). Similarly, the non-parametric test for correlation, Spearman's correlation, was carried out instead of the parametric Pearson's correlation.

3.7 Qualitative Data Analysis

3.7.1 *Thematic analysis*

The qualitative data were analysed using thematic analysis techniques, which provides a systematic and rigorous approach to coding and theme development and is a useful approach when dealing with detailed textual material such as interviews and focus groups (Howitt, 2015). The thematic analysis was carried out using an inductive approach, looking for themes and meaning in the data and the process followed a six-stage iterative approach according to Clarke et al. (2015):

1. Familiarisation with the data

   Transcripts of the interviews and focus groups were read and re-read to begin familiarisation with the data. Notes were made on recurrent topics and broad typologies by two researchers working independently, who then discussed the initial findings.

2. Coding

   The process of coding involved noting sections of text, which were relevant to the research question, and assigning a short phrase or code to the data item. Many codes were generated as the process continued and some data items were assigned more than one code. Since the inductive approach is flexible, codes were joined and renamed, or spilt as the analysis continued and developed. To ensure the coding was thorough two rounds were undertaken (Clarke et al., 2015).

3. Searching for themes

   In the development of the themes, similar coded datasets were clustered together to address key analytical points. The iterative process involved reviewing the emerging themes and a process of refinement to produce a set of candidate themes.

4. Reviewing themes

   The candidate themes were reviewed to ensure that the coded data 'fitted' into the themes. A process of checking the whole dataset was then undertaken to ensure that the individual themes and the analysis captured the meaning of the data and addressed the research question.

5. Defining and naming themes

   Theme definitions briefly describing the theme content were devised and theme names were developed to clearly describe and capture the essence of the theme.

6. Writing the report

The coding and theme development stages (2-5) were undertaken using Nvivo Pro, version 11 (QSR International, undated).

3.8 Chapter Summary

This chapter presented the research approach, including the rationale for the mixed methods research design. It detailed the quantitative methods of sample recruitment and the development, design, piloting and distribution of the questionnaires. Qualitative methods were defined including the development and process for the focus groups and interviews and ethical considerations were addressed. The methods used in the statistical analysis of the quantitative data and the thematic analysis of the qualitative data were detailed and the results of these data analyses are presented in Chapter 4.

CHAPTER 4: RESULTS

4.1 Introduction

The results section presents the findings of the data analysis of the quantitative data collected via the questionnaires in section 4.2 below. This is followed by the results of the thematic analysis undertaken using the qualitative data collected via interviews and focus groups in section 4.3.

4.2 Quantitative Results

4.2.1 *Descriptive Statistics*

A total of 197 students (89%) responded in the first round of questionnaires. Following pairing of the data entries using the unique identification codes after collection of the second round of questionnaires, 137 participants were found to have completed both the first and second questionnaires, a response rate of 62%. The paired data sets are used in the following statistical analysis to compare pre and post training. The rates of completion for adult and mental health nursing students were 130 (68%) and 7 (24%) respectively. Due to the small sample of mental health student participants, it was not possible to compare these data with the returns from the adult nurse students.

Age range categorical data showed that for the paired samples more than half of the respondents (56.9%) were age 18-24 years, and 80.3% of respondents were aged under 35 years (Table 2). Prior to undertaking nursing degrees, it is common for nursing students to work in healthcare settings and this is demonstrated by the categorical data, which showed that 50.4% had more than one year's experience in a formal healthcare setting, with nineteen students having 1 to 2 years' experience and ten students having 10+years' experience as shown in Table 3.

Table 2: Age Category Data

Age Category	Adult Frequency and Percentage	Mental Health Frequency and Percentage	Total
18-24 years	76 (58.5%)	2 (28.6%)	78 (56.9%)
25-34 years	29 (22.3%)	3 (42.9%)	32 (23.4%)
35-44 years	22 (16.9%)	1 (14.3%)	23 (16.8%)
45-54 years	3 (2.3%)	1 (14.3%)	4 (2.9%)
55+ years	0 (0%)	0 (0%)	0 (0%)
Total	130	7	137 (100%)

Table 3: Years of Formal Healthcare Experience Data

Years in Formal Healthcare	Adult Frequency and Percentage	Mental Health Frequency and Percentage	Total
Less than 1 year	66 (50.8%)	2 (28.6%)	68 (49.6%)
1 to 2 years	19 (14.6%)	0 (0%)	19 (13.9%)
2+ to 5 years	20 (15.4%)	2 (28.6%)	22 (16.1%)
5+ to 10 years	15 (11.5%)	3 (42.9%)	18 (13.1%)
10+ years	10 (7.7%)	0 (0%)	10 (7.3%)

Data relating to the students' practice placements showed that placements were mostly undertaken in Lincolnshire with United Lincolnshire Hospitals Trust, Lincolnshire Community Health Services Trust, Lincolnshire Partnership Trust and charitable organisations including MenCap and local hospice care, but some students undertook placements in Nottinghamshire for the Sherwood Forest Hospitals Trust. The numbers of students in each type of setting

remained relatively constant pre and post training (Table 4). Almost half of the adult nursing students were assigned ward placements before and after training and for the mental health students the majority had community placements.

Table 4: Practice Placement Frequency Data

Practice Placement Type	Adult Frequency and Percentage		Mental Health Frequency and Percentage	
	Pre training	Post training	Pre training	Post training
Medical ward	36 (27.7%)	37 (28.5%)	1 (14.3%)	0 (0.0%)
Surgical ward	29 (22.3%)	26 (20.0%)	1 (14.3%)	0 (0.0%)
Community	26 (20%)	25 (19.2%)	5 (71.4%)	5 (71.4%)
Outpatients	26 (20%)	26 (20.0%)	0 (0.0%)	1 (14.3%)
Elderly/dementia	9 (6.9%)	10 (7.7%)	0 (0.0%)	0 (0.0%)
Children	0 (0.0%)	2 (1.5%)	0 (0.0%)	0 (0.0%)
Learning Disabilities	1 (0.8%)	1 (0.8%)	0 (0.0%)	0 (0.0%)
A & E	1 (0.8%)	0 (0.0%)	0 (0.0%)	1 (14.3%)
Palliative care	2 (1.5%)	3 (2.3%)	0 (0.0%)	0 (0.0%)

4.2.2 Effects of Training on Perceptions of MECC and Actions in Practice

Students' overall perceptions of their own levels of capability, opportunity and motivation to deliver MECC messages were compared pre and post hybrid MECC training. Wilcoxon signed-rank tests indicated that students' combined perceptions (capability, opportunity and motivation) increased significantly following training in three of the five subject areas. These were: smoking (pre Mdn=6, post Mdn=8) T=2700, Z=-2.877, p=0.004, r=0.188; obesity (pre Mdn=6, post Mdn=6) T=2505, Z=2.755, p=0.006, r=0.181; and alcohol (pre Mdn=6, post

Mdn=7) T=2381, Z=-2.017, p=0.044, r=0133. Slight increases in the perceptions for mental health and exercise were not statistically significant.

Given the increase in overall perception, Wilcoxon signed-rank tests were undertaken to determine any statistical significance between pre and post training for each component of the perception variable i.e. capability, opportunity or motivation and these are detailed below.

Prior to training, 31% of students felt capable to deliver public health messages in all subject areas and this increased to 46% following training. Wilcoxon signed-rank tests indicated that students' increased capability was statistically significant for smoking (T=1090, Z=-4.065,p=0.00, r=-0.25); obesity (T=1711, Z=-2.787, p=0.005, r=-0.181); alcohol (T=1691, Z=-2.667, p=0.00, r=-0.169); and exercise (T=849, Z=-2.107, p=0.038, r=-0.135). The difference in capability to discuss mental health pre and post training was not statistically significant.

Overall, students reported that they felt there were not opportunities to deliver MECC messages in all subject areas either before (79%) or after training (82%). On examination of each subject area, students reported that opportunities did exist more of the time for smoking (45% pre and 55% post training) and exercise (47% and 54% respectively). On pairing of samples there was no statistically significant difference in students' self-reported opportunity to deliver MECC messages pre and post training in any of the subject areas. For the obesity questions there was no change in any of the paired responses (Z=0.000, p=1.000) (Table 5).

To assess whether opportunities may have been influenced by placement type, repeat Wilcoxon signed-rank tests were undertaken to include only students who had both the first and second placements in areas where MECC opportunities should be available i.e. on medical or surgical wards, in the community or outpatients settings (total=108 students).

Those who had placements in settings where there may be reduced opportunities to deliver MECC messages due to the acute nature of the setting, the patient's presenting condition or the type of patient were removed from the analyses. These were: A & E, palliative care, elderly/dementia settings, learning disability and children's settings (Table 4). The results showed that the placement type did not affect the students' opportunity for MECC messages to be delivered regarding smoking, obesity, alcohol and exercise and there was no significant difference pre and post training. There was however a perceived greater opportunity to have a MECC conversation about mental health following training than prior to training (T=630, Z=-2.627, p=0.009, r=-0.205) but the effect size was small.

Table 5: Wilcoxon Signed-rank Results for Opportunity

	+ve rank	-ve rank	Pre median	Post median	T	Z	Asymp sig (2 tailed)
Smoking opportunity	44	23	2	3	1363	-1.427	0.154
Obesity opportunity	0	0	2	2	0	0.000	1.000
Alcohol opportunity	35	30	1.5	2	1169	-0.904	0.366
Exercise opportunity	36	31	2	3	1237	-0.631	0.528
Mental health opportunity	32	22	2	3	909	-1.927	0.054

Prior to training, 56% of students answered that they felt motivated in all subject areas to hold MECC conversations, though 7% reported that they were not motivated in any area of MECC. Following training, motivation increased very slightly in all five subject areas, but no increase was statistically significant (Table 6).

Students' responses regarding their actions in placement after their hybrid MECC training showed that they delivered MECC messages less frequently than prior to their training.

Results showed that for all five subject areas there was a statistically significant decrease in the reported frequency of MECC interactions after their training and second nursing placement. For example: actions relating to frequency of obesity conversations were significantly lower after training (Mdn= 3) than before (Mdn=8), T=290, z=-8.873, p=0.000, r=-0.550. The results of the Wilcoxon signed-rank tests for all actions are given in Table 7.

Table 6: Wilcoxon Signed-rank Results for Motivation

	+ve rank	-ve rank	Pre median	Post median	T	Z	Asymp sig (2 tailed)
Smoking motivation	25	13	3	3	459	-1.302	0.193
Obesity motivation	27	19	3	3	604	-1.111	0.266
Alcohol motivation	21	11	3	3	330	-1.272	0.204
Exercise motivation	22	12	3	3	390	-1.631	0.103
Mental health motivation	15	10	3	3	195	-0.886	0.375

Table 7: Wilcoxon Signed-rank Test Results for Actions Pre and Post-training

	+ve rank	-ve rank	Pre median	Post median	T	Z	r	Asymp sig (2 tailed)
Smoking Actions	40	76	6	4	1801	-4.395	-0.385	0.000
Obesity Actions	17	105	8	3	290	-8.873	-0.550	0.000
Alcohol Actions	23	93	7	3	924	-6.813	-0.428	0.000
Exercise Actions	24	79	6	3	1076	-5.287	-0.341	0.000
Mental health Actions	33	61	6	3	1452	-2.948	-0.199	0.000

4.2.3 Effects of Age and Experience on Perceptions and Actions

The effect of age on the reported increase in overall perceptions detailed in 4.2.2 above was investigated using the Wilcoxon signed-rank test. The largest age category 18-24 years (n=78) showed an increase in perception following training for smoking (T=926, z=-2.815, p=0.005, r=-0.243) and obesity (T=791, z=-2.423, p=0.015, r=-0.210) only. Both of these increases were attributable to students reporting an increased capability following training (smoking T=469, z=-3.429, p=0.001, r=-0.281; obesity T=693, z=-2.705, p=0.007, r=-0.225). There was no statistically significant difference in any of the other subject areas for this age group. The 18-24 years group was the only group reporting improved perceptions, and for the three other age categories there was no significant difference in overall perceptions in any of the subject areas pre and post training, though the sample sizes for all of these age groups were small.

The decrease in frequency of students' MECC conversations following their training, as shown in Table 7, was reflected most notably in the 18-24 years age group. This groups actions for all subjects significantly decreased from pre-training levels (Table 8). In the older age groups, actions did not decrease across all subject areas, however conversations regarding obesity and alcohol decreased in both the 25-34 years group (n=32) (obesity T=18.5, z=-4.416, p=0.000, r=-0.069; alcohol T=85, z=-2.505, p=0.012, r=-0.34) and the 35-44 years group (n=23) (obesity T=41, z=-3.707, p=0.000, r=-0.57; alcohol T=19.5, z=-2.706, p=0.007, r=-0.408). Students aged 35-44 years also had fewer conversations regarding exercise after their training (Mdn=3) than before (Mdn= 6) T=28, z=-2.093, p=0.036 , r=-0.32. In the 45-54 years age group (n=4) there was no statistically significant difference in their actions pre and post training in any of the subject areas, but the sample size was small.

Table 8: Wilcoxon Signed-rank Test for MECC Actions in the 18-24 Years Age Group

	+ve rank	-ve rank	Pre median	Post median	T	Z	r	Asymp sig (2 tailed)
Smoking Actions	20	47	6	4	462	-4.237	-0.34	0.000
Obesity Actions	12	58	8	3	137	-6.488	-0.52	0.000
Alcohol Actions	12	56	7	3	283	-5.446	-0.44	0.000
Exercise Actions	13	47	6	3	297	-4.564	-0.37	0.000
Mental health Actions	20	35	6	3.5	471	-2.512	-0.21	0.000

Spearman's rank correlation shows that there is a significant correlation between age group and years' experience, $r_{s,}$ =0.385, p=0.000, N=137, thus the effects of years' experience were similar to the effects of age. Pre and post training perceptions were only significant in relation to smoking and obesity, and the students with the least experience <1year showed significantly improved perception for both smoking (T=767, z=-2.491, p=0.013, r=-0.23) and obesity (T=738, z=-2.178, p=0.004, r=-0.20). Those with the most experience 10+ years, showed an increase in perceptions for obesity only (T=0, z=-2.232, p=0.026, r=-0.56) and those with 5+-10 years' experience had greater perceptions of smoking (T=71, z=-2.541, p=0.011, r=-0.498), though sample sizes were small for these groups being 10 and 18 respectively.

The significant decreases in MECC conversations in practice following training was notable in students with <1years experience, where actions in all subjects significantly decreased (Table 9). Conversations about obesity were significantly lower across all experience levels, and conversations regarding alcohol reduced in all groups except for the 10+years' experience group. The group with 1-2 years' experience also showed significant reductions in conversations regarding smoking and exercise.

Table 9: Effects of Years' Experience on Actions in Practice

Years' experience	Smoking Actions	Obesity Actions	Alcohol Actions	Exercise Actions	Mental health Actions
<1 year	T=492 Z=-3.406 **p=0.001** r= -0.309	T=59 Z=-6.459 **p=0.000** r=- 0.562	T=232 Z=-4.833 **p=0.000** r= -0.427	T=328 Z=-3.439 **p=0.001** r=-0.311	T=310 Z=-2.853 **p=0.004** r=-0.277
1-2 years	T=15 Z=-2.102 **p=0.036** r=-0.350	T=10 Z=-3.006 **p=0.003** r=-0.501	T=7 Z=-3.300 **p=0.001** r=-0.550	T=5 Z=-2.991 **p=0.003** r=-0.513	T=21 Z=-1.719 p=0.086 r=-0.294
2+-5 years	T=50 Z=-0.908 p=0.364 r=-0.144	T=13 Z=-3.316 **p=0.001** r=-0.525	T=34 Z=-2.478 **p=0.013** r=-0.392	T=20 Z=-2.492 **p=0.013** r=-0.405	T=34 Z=-0.808 p=0.419 r=- 0.139
5+-10years	T=42 Z=-1.640 p=0.101 r=-0.273	T=5 Z=-3.398 **p=0.001** r=-0.566	T=27 Z=-2.128 **P=0.033** r=-0.355	T=25 Z=-1.708 p=0.088 r=-0.312	T=57 Z=-0.841 p=0.401 r=-0.154
10+years	T=11 Z=-0.983 p=0.326 r=-0.232	T=1 Z=2.392 **p=0.017** r=-0.599	T=4 Z=-1.367 p=0.172 r=-0.322	T=7 Z=-0.738 p=0.461 r=-0.185	T=6 Z=1.279 p=0.201 r=-0.907

4.2.4 Effects of Shame and Guilt on Participants' Motivation and Actions in Practice

Across the whole sample there was a significant positive Spearman's rank correlation between the PFQ-2a sub-scale for feelings of guilt and sub-scale for feelings of shame both before ($r_{s,}$ =0.711, p=0.000, N=136) and after training ($r_{s,}$ =0.797, p=0.000, N=132). Similarly, there were positive correlations both before and after training for participants awareness of guilt and shame demonstrated by the 3PS questionnaire and their feelings of guilt and shame during the clinical encounter. The results showing correlations both before and after training and are given in Table 10. Awareness of guilt and shame (3PS), and feelings of both guilt and shame in the clinical encounter showed no significant correlations with participants' motivation to deliver MECC messages in any of the subject areas. Following training however, there was a weak negative association between awareness of guilt and shame and students' actions in practice in relation to delivery of smoking MECC messages. As the students' awareness of guilt and shame increased the frequency of actions for smoking decreased r_s =-0.195, p=0.28, N=127.

Table 10: Spearman's Rank Correlations between 3PS and Sub-scales Guilt and Shame

	3PS and Sub-scale Guilt	3PS and Sub-scale shame
Pre training	$r_{s,}$ =0.322, p=0.000, N=134	$r_{s,}$ =0.347, p=0.000, N=135
Post training	$r_{s,}$ =0.280, p=0.001, N=121	$r_{s,}$ =0.284, p=0.001, N=128

When considering different age groups and both the students' awareness of, and feelings of guilt and shame, there was no correlation with their motivation or actions in practice with any of the MECC subjects prior to their training. Following training however the youngest age group, 18-24 years, showed a significant negative Spearman's rank correlation in sub-scale feelings of guilt and their motivation to deliver both alcohol and exercise messages (alcohol r_s= -0.308, p=0.013, N=65; exercise r_s=-0.277, p=0.25, N=65) though the effect sizes were small. Conversely, the age 25-34 years group showed a positive correlation in motivation to

discuss obesity and their awareness of guilt and shame (r_s=0.512, p=0.004, N=30) and their feelings of guilt (r_s=0.379, p=0.039, N=30) and shame (r_s=0.408, 0.023, N=31). Students aged 25-34 years also showed an increase in motivation to discuss alcohol post training, as their awareness of guilt and shame increased (r_s=0.387, 0.032, N=31) and their feelings of shame increased (r_s=0.368, 0.038, N=32).

The effects of shame and guilt on students' actions in practice following their training showed some positive Spearman's rank correlations for discussions regarding mental health. In the 18-25 years group, as levels of guilt and shame increased the students' actions in relation to mental health increased (guilt; r_s =0.260, p=0.043, N=61; shame r_s =0.289, p=0.024, N=61) and this was similar to the age 25-34 years groups, whereas awareness of shame and guilt increased, actions around mental health increased (r_s =0.387, 0.046, N=27). Conversely the actions of the 35-44 years group following their training showed that as awareness of guilt and shame increased, the frequency of mental health conversations decreased (r_s =-0.532, 0.016, N=20). Conversations regarding obesity also decreased in this group as their levels of guilt (r_s=-0.574, p=0.005, N=22) and shame increased (r_s=-0.570, p=0.015, N=22).

4.2.5 Missing Data and Survey Fatigue

There were incidences of occasional, isolated missing data entries throughout the questionnaires despite the attention paid to avoidance of careless responses in the questionnaire design. One respondent also missed one whole side of the MECC-RS questionnaire, and occasionally a respondent missed one question row, or one perception column on the MECC-RS questionnaire. As a result, there were different denominators across the variables in the data analysis.

On viewing the questionnaires a limited number may have been subject to survey fatigue, whereby the same response was given to all questions on the MECC-RS questionnaire,

though this is difficult to prove. The reverse question in the 3PS questionnaire was designed to test this and there were three and six instances respectively from the first and second questionnaires where the same response was given throughout. This suggests the participants may have ticked the same box in the column without reading the question, though this again is difficult to prove and, in addition, equates to only 2% and 4% of the samples.

4.2.6 Additional Comments on Questionnaires

Whilst the questionnaires were specifically designed with closed questions and no extra space for comment, there were occasional hand-written notes from respondents in the margins, which are worthy of reporting as follows:

- In response to question 4 on the MECC-RS questionnaire regarding whether the participant ask patients if they consider themselves overweight, one respondent wrote *'I don't want to hurt people's feelings'*, though no other notes were written relating to the other health topics such as smoking or alcohol.
- In response to question 14 on the PFQ2(a) questionnaire, one participant responded that they felt a little bit helpless or paralysed when asking a patient to make a behaviour change and added '*that I don't know what help to offer'*
- One mental health student responded to all of the questions in the PFQ2(a) questionnaire with the response *'I do not experience the feeling'* and added in free text that '*as long as the suggestion is being made <u>purely</u> in their best interests then you should not experience the feelings*?'

4.3 Qualitative Results

4.3.1 Overview

The thematic analysis using NVivo Pro v11 involved an iterative process of coding and recoding excerpts from all the transcripts of the qualitative data from the two focus groups and

two interviews with adult nursing students. The texts associated with each code were read and where necessary recoded as the analysis and the themes developed. On reviewing the emerging themes it was evident that some required refinement and amalgamation to avoid duplication of codes. This process resulted in the emergence of four themes, which are detailed in Table 11 along with their codes.

Table 11: Results of Thematic Analysis

Theme	Codes
Role Identity	Power and hierarchy Motivation Understanding of MECC
Personal Identity	Confidence: knowledge and role of the university Moral emotions – guilt and shame Fear of offending Judgemental Reflective practitioners Courage
Placement Environment	Systems issues Staff attitudes and influence Staff knowledge Opportunities Barriers and challenges
Interacting with the Patient	Patient reactions Strategies Holistic approach Sensitivity Relationships Difficult subjects

4.3.2 Role Identity

In general, throughout the conversations, the students demonstrated that they understood the concept of MECC, the importance of it and the need for public health promotion to try to help

reduce ill health and ultimately the burden it places on the NHS. They demonstrated that they were aware of their roles and responsibilities as a qualified nurse and that other healthcare disciplines had an equal role to play in delivery of MECC messages.

> *I feel like it is a really positive thing…… But I do feel quite excited about when I qualify; about actually being able to understand what is out in the community, and how you can help people, and connect with other services; things like that as well.* [Student 6 (S6)]

> *It's trying to make the public look after themselves in a way, managing especially diabetes at the minute and stuff. Yes, so it's a lot of cost cutting and time saving……..And it can be really, really important.* [S4]

There was general enthusiasm around MECC and the students felt that they had an important future role to play in public health promotion, being part of a new generation who could help to elicit health behaviour changes.

> *I know I'm trying my best to the best of my ability and to try and help people as best as I can* [S7].

> *We are the next generation of nurses so actually we can make a difference [S4]*

> *We're the up and coming, so knowing now that this is what we need to do, it sets the trend doing it… early* [S5]

Student 5 also grasped the concept that MECC reaches beyond the healthcare setting.

> *So it means outstretching it into the community. So educating hairdressers…. I think it needs to be out rolled within the community, so supermarkets where*

people have training….So maybe reaching out in the places where you wouldn't expect it [S5]

This idea that students understood their future role and were excited about practicing MECC when qualified, did not always apply to their student role. Several expressed the view that their status 'as a student' sometimes led to them being less likely to be involved in MECC conversations. In part this seemed to be from a misunderstanding around their role identity whilst still in training and the relevance of the training they had received in their first academic year, which some thought was an exercise in awareness of MECC rather than something they should be putting into practice.

I feel like if I was a nurse then I probably would have done…. No, I felt like as a student, I couldn't. [S6]

As a student you're always being watched a bit aren't you? So I don't know whether it's your place to say anything, you know? [S4]

In comparison to last year we've sort of got the gist of it. We had a lecture and then from that lecture I didn't have a clue what it was. [S5]

I'm not gonna lie I don't think I took it in enough because I didn't realise the importance of it. You know like emphasize to me the importance of this lecture and the importance of using it in practice. It was kind of just like a guest speaker coming to talk to us. [S4]

Two students in the focus group however felt the training they received was good and that learning about the different signposting services had helped them in practice.

I felt like my MECC training that I've had in Year 1, and….. community day that we had…… it gave me ideas and that to pass on to patients. I was able to utilise it on [NAME] ward when I was looking after patients. [S1]

For some, the perceived organisational hierarchy and issues of power caused them to avoid MECC conversations. This was a result of students believing that they could not question the actions or inactions of qualified staff. For some students they also thought that patients wouldn't listen to 'a student' because some patients perceive a hierarchy of healthcare workers, and this may have further undermined the sense of students' authority in holding healthy conversations.

But at the moment, I don't know, you sometimes feel when your mentor is there, you can't really question what they are saying [S6]

I think if the doctor said it they tend to they listen to them don't they?….sometimes the public think it's more of a hierarchy don't they? [S4]

Whilst confusion over role identity appeared to inhibit some students in the delivery of MECC messages, there was no lack in students' overall motivation to be part of health promotion in the long term. Some cited examples of where they had already delivered or tried to deliver messages despite the issues of hierarchy. Evidence of motivation was universally noted, even from students who currently had problems with role identity.

I think the newer qualified nurses, and people that have had recent education, they tend to kind of – We know a lot more, so we will push it [S7].

I find it really interesting and just so good that you can have a patient with completely different issue but they can come to you and you can help them in different ways [S6].

She's lovely, don't get me wrong, but she is just in and out; she wasn't interested. I tried to talk to patients when she was doing the dressings and things, but she seemed to get on and get going [S2].

4.3.3 Personal Identity

Students' own personal identity appeared to be a factor in their perceptions and actions around MECC, with their perceived capability to implement MECC being a reoccurring factor throughout the conversations. The issues around capability related to the notion of needing confidence to hold a conversation, which also linked back to their role identity, but here this confidence stemmed from having the required levels of knowledge. Students expressed that they wouldn't enter into a MECC conversation unless they felt confident in the advice they were giving to the patient and had the knowledge of the latest services available for signposting.

If you haven't got the knowledge to know what you need to be saying because I couldn't recommend on how many units to drink every single day to make it healthy for a month, do you see what I mean? [S5]

I think it is just not having the knowledge to back it up. You hear about these things and it is just not knowing where to signpost them; and not knowing exactly what they do; because a lot of people have questions – What is it about? What do they do? I don't really know all the ins and outs. [S2]

It is just making yourself aware of what is about. In Community, I didn't know half these people existed. I'd heard of Shine, and AddAction, but I think that was about it. Oh, and the food bank. That was it. I didn't know about any of the others; but then there is so many, isn't there? They always change depending on funding. [S3]

Two students, however expressed that this lack of knowledge had motivated them to research areas relevant to their placements in future to enable them to feel more confident in practice. Furthermore, motivation was demonstrated by students offering ideas about ways to improve knowledge and confidence via their university education to help them with MECC in practice. One student suggested that demonstrating competence in MECC could be included on their Practice Assessment Document (PAD).

> *The next time I actually go out into placement, wherever it might be, I'm going to find out what services are available, to sort of help people.* [S6]

> *I think on our PAD documents, we have the essential skill clusters, we could have something relating to public health and squeeze it into practice; and we have to be competent with providing that; so we would have to do that on a placement…but even if it's just something say this university regulates, then we are making that step to making that change because we will be using it regularly because the mentors are like – You need to be using MECC. You need to prove to me MECC is being used here* [S7]

Several students also expressed a lack of confidence in initiating a conversation, which they felt came from a gap in teaching around putting MECC into practice. Two students [S6 and S7] discussed the need for a framework or tool, which they could use to structure the interaction, though no other students expressed this opinion. One student offered ideas about how teaching of MECC could be improved in university by incorporating MECC into clinical skills sessions and using role play to simulate conversations in practice to improve confidence in conversation skills.

> *It's like how do you approach that subject if somebody's tray is just full of crisps and chocolate?* [S1]

And you might have the knowledge, and you might know all the risks and everything like that but if you're not sure on how to bring it up in the first place, then what is the point? [S6]

They speak about MECC and you have these little case studies……but we never have a role play like you are the patient and I'm trying to have the conversation with you for the first time; and I think that is really important. [S6].

Students' personal feelings regarding patients' health behaviours were occasionally mentioned, with some making judgemental remarks and other expressing not wanting to stereotype or judge patients, but with both scenarios resulting in them avoiding conversations.

People that drink, might be a bit stereotypical here, people that drink tend to have more issues with drinking, you know what I mean [S4]

I think sometimes, with a patient as well, you don't want them to feel you are being judgemental [S6]

Feelings of guilt and worries about offending people were also expressed by five students, and this also led to them not wanting to hold MECC conversations. For some students however this led to a period of reflection regarding their moral emotions and how they should deal with these going forward.

You worry about offending people, don't you? [S2]

I think I'd be more worried about what they were feeling, but then when I say it out loud, I don't know why because at the end of the day, you are just trying to help someone, aren't you? So actually it sounds a bit stupid when I say it out loud. [S6]

If you do offend someone, I suppose you could say – Sorry, I don't mean to offend you, but I'm just concerned about your health? [S3]

Feelings of shame were also a factor in delivery of MECC for some students who had their own unhealthy behaviours. One student, who appeared outwardly healthy, admitted to feelings of shame following MECC conversations.

My diet is terrible. I don't eat fruit that often. I don't exercise. I don't do anything….. I feel awkward about it really. I'm lecturing them about you have to do this, and I'm not doing it. I sort of go home, and feel a bit bad, and eat another bar of chocolate [S2]

Three students who smoke or were ex-smokers also expressed emotions and actions synonymous with shame, such as feeling hypocritical and consciously hiding their behaviours in placement settings because:

I think I'd feel a bit naughty like I'm cheating on them [S5]

For these students, the shame they felt about their personal identity influenced whether or not they delivered the message and how they felt about themselves afterwards. There were instances however where students acknowledged their own poor health choices and used it to empathise with the patient and help in the MECC interaction.

She was going on about going out for a cigarette, and she was saying – Oh, it's so hard. I want to give up. I said – I feel the same about my nightly glass of wine…. We are all trying to be the best we can, you just have to keep at it [S3]

We're not the pinnacles of brilliant health ourselves, we do eat chocolate we have normal lives, but then we make better choices and we can help people along with those better choices [S5]

4.3.4 Placement Environment

Placement environment, particularly culture and staff influences, as well as the type of placement, seemed to influence students' behaviours and actions around MECC. Several students reported that they had not witnessed MECC in practice:

personally, I haven't really seen a lot on the wards that I've been on [S7].

This in turn appeared to influence their own behaviours in practice.

because obviously when you come in as a student, you kind of copy people don't you, in a way? … you take bits from that person… but if we are going out into practice and not seeing it being done, and we can't see it being done well, see it being done badly, we can't really take anything from it… because we can't then say – Oh , that nurse delivered that MECC message really well, I'm going to go – that's how I'm going to do it next time or whatever, because actually I don't really think I've seen it. [S6]

Where students did work with health professionals who carry out MECC there tended to be a positive effect on the students' attitudes and motivation. Students mostly talked about nurses, rather than other healthcare professionals, who had engaged in MECC conversations, probably due to the nature of their training and the fact that they spend much of their time with nurses. One student did however give an example of a MECC conversation in an outpatients' setting, where a consultant talked to a patient about alcohol intake.

I was working with a nurse and she was quite good about it……. She said – Here is a really good website. He said – I'm not interested. But then she had offered; whether he takes that up, probably won't, but at least she has put it out there for him. ……But working with people like that, almost gives you the confidence to do it yourself [S1]

I was there when the consultant he re-educated them to drink things that were less prolifically damaging to their liver [S4]

Overall students recounted very few examples where they had seen MECC practiced, and they offered reasons why they thought this was happening. There was a view that many nurses were simply not aware of MECC or did not have sufficient knowledge to implement it, with one suggesting that those nurses who had been educated more recently were more likely to practice MECC than the older nurses, though no evidence of this was proffered.

I don't find that a lot of the nurses that are already in practice are aware of MECC as much as we are [S7]

I'm not saying they were horrible nurses: they were brilliant nurses; but there just wasn't that knowledge [S3]

There was also the suggestion that because MECC was not part of any audit trail some nurses tended to stick with the tasks that they were required to do for which there were targets set. One student suggested that some nurses were focussed solely on the task of treating and discharging with no consideration that health promotion may prevent readmission. Furthermore some students felt that nurses avoided having MECC conversations because of the perceived time pressures and extra work that would be created.

I kind of feel like sometimes people think it is not their responsibility, and it is kind of like – We are just here to do this part of the job, we are just on this ward treating this, and when that is sorted, they are not our problem anymore [S6]

I think with the ones I've worked with don't have the conversation because they don't have the time; they don't want to get involved. If they say something about one thing, it will open a can of worms. [S2]

One student however recounted a situation where a community nurse did not use time as a reason not to engage in health promotion with patients who would benefit.

(Nurse name) would go above and beyond. She would give them contact numbers, social services. She would always signpost; that was what she was really good at. If she didn't have the time, she would have the numbers for them to make the call [S1]

The types of placements that the students had attended were predominantly in secondary care settings, including both medical and surgical wards, emergency care and outpatients' services. Four of the students had also completed placements in the community. Students suggested that the type of healthcare setting could on occasion be used by nurses as a determinant of whether or not to deliver a MECC message. Outpatients and community were considered areas where MECC could be applied, but there was an example where a nurse consciously decided not to deliver a health promotion message in A & E (minors) as she deemed it was not an appropriate place.

She was an advanced nurse practitioner, and she said – 'Oh, to be honest, I think it's his weight but I didn't say anything because I don't think this is the right environment for it.' [S6]

The influence of organisational systems was also cited as a something that can affect staff behaviours in practice. It was suggested that because healthcare workers are governed by systems, policies and paperwork at times this impeded their motivation and instincts to deliver public health messages.

> *it gets left behind because there is all these other things to do, and all these policies to put first; and like I said, it gets left at the back and forgotten almost*. [S7]

In the community setting, staff had at one time been required to record MECC conversations on a template on the patient's electronic record, SystmOne, but there were systems issues with this method, which caused problems for nurses in practice. One student nurse suggested since no one used the template, MECC was not being recorded. It was also acknowledged by the student however that just because there was no system for recording MECC this did not necessarily mean that staff were not having the conversations, merely that they were not filling in the form.

> *When I was in the community…I asked them –'Do you use MECC?' and they said – 'Well, we had a template come up on SystmOne, and it kind of came and then just died a death, and then we've never used it since'…….but then you don't know…I mean how much they have a chat… it might not be something they needed to fill a form in. You know, they are all local people; they know what was about [S3]*

Notwithstanding the difficulties posed by the placement environment on the students, the majority felt that there were always opportunities for them to have MECC conversations, with Student 5 stating there were opportunities '*all the time'* and Student 6 saying *'if you wanted to deliver the messages, then you could.'* It was generally felt that as students these opportunities to promote health were not constrained by a perceived lack of time.

I don't think time stops you, because you can create time. If I can create time to go and get a drink, I can create time to spend that extra time with that person.[S5]

I do sometimes think we blame a lot of things on time…..when actually we could utilise a bit better. [S6]

Discussions generally around opportunities within healthcare to promote healthier lifestyles generated ideas amongst the students that could improve the frequency of delivery of MECC messages. A couple of students picked up on the idea that healthcare support workers were in the ideal situation to hold conversations, particularly during mealtimes or when giving personal care. Another also suggested that when completing admissions paperwork, there was a good opportunity to deliver MECC messages when asking patients lifestyle questions, but at present this was a seemingly missed opportunity. One student also suggested that there should be a system within Trusts to effectively have MECC link nurses, who were responsible for collecting and disseminating information about available signposting services to help with promoting the concept, supporting their colleagues and providing the knowledge needed to implement MECC.

4.3.5 Interacting with the Patient

The students generally demonstrated a caring and sensitive approach when discussing their interactions with patients, often demonstrating levels of empathy and understanding in the difficulties faced when speaking about making behaviour changes. Some students gave descriptions of informal conversational style, including being 'jovial' or using humour to help them in the conversation. One described the importance of 'chit chat' in gaining insight to people's lifestyles, and person-centred care principles were evidently important in MECC delivery.

I'd say it in such a human way, not like a robotic….not throw information at them [S5]

Following on from the concept of person-centred care, several students discussed the need to have an holistic approach when having or considering having MECC conversations. Discussions around the social determinants of health showed that students wanted to question patients about their social circumstances to try to understand if this had any connection to their health behaviours. One student also noted that MECC conversations are invariably about specific health behaviours and felt that they don't get across holistically the psycho-social effects of diseases caused by poor health behaviours.

I'd probably tell them the results and then maybe delve into why they drink so much, there could be a reason [S4]

You'd look at them with all of the social factors of their lives….. you know it could likely alleviate financial difficulties and creating room for other things to be better [S5]

The whole sort of bio/psycho/social bits around it; and it's good looking at the social bits; and they have a lot of the biology to say – This is what could happen. But it's the social bits, and looking at it holistically, I think; some bits of MECC doesn't pull from all angles [S7]

On occasion, students reported that they gauged the receptiveness of patients to see if they were amenable to discussing behaviour change. Depending on the response, the reactions of the students were to either try a different approach or to give up on the MECC conversation.

You do think maybe this is something I need to promote, so you mention it and you see how they react with that, and if not you try different options [S5]

You maybe have to gauge the situation; if they are a bit prickly or maybe not very receptive, maybe you would just not say anything [S3]

Several students mentioned that they felt that it was easier to have a MECC conversation with someone if they had the time to build a relationship with them and it was thus easier to gauge if they were receptive to behaviour change. It was also noted that personalities may influence whether patients are receptive, and this affected whether the students delivered the MECC message.

You can't approach someone and just be like 'you're fat' [S5]

I kind of slotted it in there; but that is only because I had been chatting to him and built up a relationship [S3]

And patients do have their favourites: someone can go to them and they are lovely, and then you can go over and they are horrible. It does depend who is delivering it [S6]

Conversations regarding smoking cessation were deemed by most students to be the easiest to address compared to alcohol consumption and obesity for example. Students reported that this was probably because:

Smoking's an everyday subject, people approach it all the time [S5]

It is plastered everywhere, and it is the most obvious [S7]

Addressing alcohol consumption was perceived as more difficult for some students who felt that because drinking was socially acceptable they predicted that patients may less amenable

to MECC conversations, though they offered no evidence for this. Tackling the subject of obesity was also considered to be challenging for several of the students and some had mentioned that they used the strategy of speaking to patients about healthy eating rather than discussing obesity directly as they felt this was less offensive to the patient.

> *I think if you are talking about healthy eating, it doesn't sound as negative as saying someone is obese* [S6]
>
> *Don't say – Don't have that bag of crisps. Maybe just, I don't know, the benefits of eating healthier and it will make you feel more energised* [S1]

4.4 Chapter Summary

This chapter presented the results of the statistical analysis of the quantitative data, including the improvements in students' perceptions of MECC, but decreasing actions in practice, following their training. It presented the results of the analysis of the effects of age and experience on students' perceptions and actions and the role of guilt and shame in MECC interactions. Results of the thematic analysis of the qualitative data revealed four themes associated the students' role identity, their personal identity, the influence of the placement environment on their actions and behaviours and the complexities of interacting with the patient in the real-world environment. The findings in this chapter are used to inform and develop the discussion of the evidence in Chapter 5.

CHAPTER 5: DISCUSSION

5.1 Key findings

This study provides insight into the values, behaviours and experiences of student nurses in the clinical environment and improves our understanding around the hybrid MECC training they receive in their academic studies. This is of relevance given the lack of research, particularly quantitative studies, regarding MECC and the paucity of evidence relating to the nurses' role in the initiative. The quantitative results of the research show that nursing students reported an overall improvement in perceived capability around the MECC initiative following their training, yet they also reported an overall reduction in frequency of health promotion actions during their practice placements and this requires further discussion. According to the COM-B model of behaviour change, an individual must have the capability, motivation and opportunity to change a behaviour. Here it has been shown that despite an increased capability, and similar levels of opportunity and motivation pre and post training, the desired outcome of the training programme i.e. an increase in actions in practice, has not happened and this has implications for the long-term implementation of MECC by these students when they qualify as nurses.

This discussion considers the statistical results obtained, drawing on the qualitative data from the second-year students to try to evaluate the findings. The quantitative results regarding nurses' values and the role of guilt and shame around health behaviours and health promotion showed very mixed results. Whilst the findings are discussed, less emphasis is placed on these particular factors as they appeared to play less of a role in influencing the student nurses' actions and behaviours.

5.2 Confidence and Capability

Overall capability to undertake a task requires both psychological capability, including knowledge, understanding and confidence, and physical capability – having the requisite skills to complete the task (Michie et al, 2011). When responding to the MECC-RS questions it is worth considering that the students may have reported their perception of capability based on an improved knowledge about MECC as an initiative. Given the young age and work experience levels in this cohort of student nurses, it is conceivable that they had not heard of MECC, and that post-training they report an improved capability based on an increased awareness. Having the knowledge that MECC exists however, is not the same as having the knowledge and skills and confidence to put it into practice. The skills and confidence to apply the concept are important factors, which if lacking may have contributed to the dissonance with their actions in practice. This issue was also reported by Webster (2018) who found that qualified paediatric doctors and nurses reported an increased knowledge of MECC following training but correspondingly they reported a reduced ability to deliver public health messages in practice. Webster (2018) postulated that this may be attributed to them feeling less confident about 'formalising' the methods around healthy conversation skills. Similarly here second year students expressed the concern that whilst knowledge was important, without skills and confidence they were less likely to undertake MECC.

This notion of needing confidence to be able to undertake a task was a recurring theme in the responses from the focus groups and interviews. It was apparent that some of the second year students demonstrated confidence, evidenced by actions in practice, whilst others lacked confidence in certain aspects of MECC, particularly in how to initiate a conversation. Wills and Kelly (2017) also found that as well as having knowledge, knowing how to start a MECC conversation was strongly associated with nursing students having the capability to have a healthy conversation with patients. Starting a conversation formed part of the hybrid MECC teaching that the University of Lincoln students had received, and they were given theoretical

examples of different ways to approach a difficult topic. The teaching was delivered in a lecture format and the students had little opportunity to put this theoretical knowledge into practice in a safe environment with their peers before they were expected to carry it out in practice. This lack of experience in conversation skills may have affected some of the students' confidence and thus proved a barrier in practice. Speller and Dewhirst (2015) reported that scenario-based training, where participants had the chance to try their conversation skills, helped improve confidence. Furthermore, Percival (2014) reported that a participatory workshop for nurses where listening, questioning and reflection skills were practised using a role play format resulted in better communication skills and greater confidence to engage in difficult conversations. Hart et al (2018) similarly concluded that student midwives wanted to receive training using examples and videos to give them confidence in practice to have difficult conversations regarding obesity in pregnant women. Whilst they reported feeling more capable following an online behavioural change training programme, not allied to MECC, they demonstrated no increased intentions to practice their new knowledge on placement and felt that their training may have been an influencing factor. This idea of role play and training in conversation skills is worthy of further investigation to determine if it may be of benefit in future MECC training with respect to addressing confidence and skills and students' capability to implement MECC in practice.

In addition to having confidence to start a conversation, Student 7 discussed having a MECC framework or tool that could be used to help structure a difficult conversation. This was also reported by Charlesworth et al (2019) who found that the lack of a protocol hindered radiographers MECC practice. The radiographers wanted clear policies and processes to follow but this appears contrary to the opportunistic, natural style that should constitute MECC. As other previous research has not been carried out in this area relating to nurses and MECC is it difficult to conclude whether a MECC tool would be useful for the students in practice.

It is worth considering that the reported significant increase in perceived capability may also have been associated with the students having a greater knowledge of signposting services following their 'community day'. Having knowledge about local services was mentioned as being an important factor in giving the second-year students confidence to start a conversation. Similarly, Charlesworth et al (2019) found that a barrier to radiographers giving Brief Advice regarding smoking cessation, was a lack of knowledge about available services. For the second-year students however it was apparent that some were not confident in their knowledge of local services and this impeded their MECC practice. Concerns were expressed that the changing nature of services due to funding meant that they always felt they needed to keep up to date with organisations but didn't always feel confident that they had the right information to hand. The signposting services they mentioned had not in fact changed for several years, and certainly not since the students had attended the 'Community Day' the previous year. This may stem from a lack of confidence in their own knowledge, which is inhibiting their health promotion practice. One solution would be to have update training or information provided on services to ensure the students have confidence in their delivery of MECC messages. This was also found in the pilot of the Wessex model (Dewhirst and Speller, 2015) where participants felt that they needed regular refresher training to keep them updated on services. Second year students felt that this information could be provided by having MECC link nurses who would be responsible for obtaining and disseminating up to date information on services, possibly via a folder available in the clinical area. This concept of a MECC resource file was trialled by Patten and Crutchfield (2016) following a similar suggestion from their qualitative research. The results were mixed as some people found it useful, others still reported difficulties in knowledge of services and some were concerned about whether it contained current, relevant information. There is a lack of research relating to the importance of confidence in nurses' knowledge around services and further investigations into the potential benefits of the introduction of MECC link nurses and any associated effects on knowledge, confidence and actions in practice is worthy of consideration.

5.3 Opportunities and the Influence of Organisational Culture

It is difficult to draw conclusions about why first year students felt the availability of opportunities to deliver MECC messages were not more apparent both before and after training. Even after discounting placements where there may be a perceived limitation on delivery of MECC e.g. palliative care, students still were more likely to answer that there were no opportunities rather than lots of opportunities in practice. The first questionnaire did not refer to MECC, rather to public health promotion in general, and it is conceivable that students at this timepoint, with their associated youth and lack of experience, perceived health promotion as something more complicated, which could take a long time to convey and this may have limited their perception of opportunity. The results from the second questionnaire, which showed no significant difference from pre training levels, suggests that the training they received may not have conveyed, or the students may not have understood, the concept of MECC, which is 'opportunistic' in nature. Fundamental to its foundation is the idea that the brief nature of the interactions maximises the opportunity for conversations to happen (PHE, 2016a) after all it is about making every contact count. It is difficult to conclude why the students did not grasp this concept following their training. Tinati et al (2012) suggest that the differences in perception of opportunities that they noted amongst the Surestart staff may be a reflection of confidence and competence, but it is contested that these factors are associated more with capability than opportunity.

Whilst the first-year student nurses reported limited opportunities in practice, interviews with the second years showed that they generally felt that opportunities were available for MECC and Student 5 went as far as to say that opportunities presented '*all of the time'.* Given the above national averages of the county's poor health behaviours, this is likely to be true, yet the general experiences of student nurses in practice were that many opportunities to discuss health behaviours are being missed by qualified personnel. Students surmised that lack of staff knowledge around MECC, cultural influences and increased workload contributed to this

and these factors have been reported regarding behaviour change initiatives (not always allied to MECC) elsewhere (Hebron et al, 2016; Pattinson and Jessop, 2016). With their improved knowledge post training and their experiences of practice it was evident that the students were motivated to develop ideas that could improve the potential opportunities, which could be implemented at a systems level to increase the delivery of MECC. Part of the students' education requires them to challenge and ask questions about systems, processes and practice and to continually look for areas where services can be improved. These thought processes were evident as students identified areas where there were missed opportunities and they generated ideas around incorporating questions into existing admissions paperwork and ensuring that other healthcare workers were educated and trained to deliver MECC.

Contrary to similar research regarding MECC where time was considered to limit opportunities (Charlesworth et al, 2019; Chisholm et al, 2018; Elwell et al, 2013), the second year students considered this was not a barrier to them holding conversations, which was also reported by Jon Dawson Associates (2013). Students' experience of current practice however suggests that time does influence some qualified personnel, and that it is used as an excuse not to MECC. Avoidance of MECC, which the students reported in some clinical settings, appeared to be influenced by the culture of the team, which Michie et al (2011) recognised as a social factor affecting perceived opportunities. It is therefore possible that the low levels of opportunities reported by first year students may be symptomatic of the cultural barriers experienced and reported by the second-year students. A lack of MECC being embedded in organisational culture as identified by Chisholm et al (2018) arose in conversation with the second years and evidently influenced some of their behaviours in practice. Conversely where students reported positive examples of MECC conversations by staff, this influenced their own perceptions of opportunities and confidence in holding MECC conversations. There was however an overall sense that the initiative was not entrenched in practice and this was

inhibiting students and putting imposed limitations on their perceived opportunities and these were also the findings of the student nurses interviewed by Mills (2019).

The organisational culture also presented issues with power and hierarchy, which created barriers for the students due to the attitudes and actions of some staff members around MECC. This proved to be influential on the students' actions and there were concerns expressed about their role 'as a student', which they seemed to consider caused them to be subordinate in the clinical setting. A hierarchical structure, which was largely reported in secondary care settings, resulted in some students perceiving that their opportunity to MECC was impeded by this cultural influence. In reality, the opportunities to MECC still exist, only the students lack the moral courage or confidence to speak up. This may be attributable to students tending to want to belong and conform to the placement norm, and not to 'rock the boat' for fear of impacts on their future relationship and assessments (Bickhoff et al, 2016). This again stems back to the notion that the students lack confidence to challenge and to speak up and that this affects their perception of the opportunities available and thus their actions in practice. Conversely however, students who worked with mentors who were aware of and practiced MECC reported feeling more confident and motivated to do so themselves. The influence of a positive role-model in the clinical situation has been shown to be important in shaping student nurses' own values, attitudes and behaviours (Jack et al, 2017) and is likely to be a contributary factor here.

5.4 Motivation

Whilst student nurses considered that opportunities to deliver MECC messages were not always available to them, there was still a generally high level of motivation around public health promotion. Even prior to their training more than half were motivated in all subject areas and this may be as a result of the teaching that they had already received within the

university curriculum. Teaching on and familiarity with the NMC Code (2018) happens early in the academic curriculum and the requirement for public health promotion is set out here, which may account for students' responses. The second year students also commented that they see themselves as agents for change, feeling that as the new generation of nurses, having been educated to the standards of the updated NMC curriculum, they have knowledge and can bring motivation to the role, which they consider is lacking in the nurses who have not been exposed to a degree curriculum and qualified many years ago. This enthusiasm and knowledge are encouraging, and at an individual level should help to improve health promotion, but at an organisational level individuals are unlikely to change the ethos and culture without support from colleagues and managers, which is required if MECC is to be sustained and health promotion is to be embedded in the culture (Mills, 2019).

Motivation of student nurses is also likely to be connected to the types of people that the profession attracts. The moral standards of people who enter the care profession generally reflect society's expectation of what a nurse should be and how they should act (Beauchamp and Childress, 2013) e.g. caring, working for good, compassionate. Student nursing candidates are selected using values-based recruitment, which ensures that those admitted onto the course demonstrate the values of the NHS Constitution (2015) and demonstrate the moral principle of beneficence -the act of doing good. It follows therefore that the inherent wish to do good would translate into being motivated to help people in the long term to attain better health and avoid becoming ill. The idea of helping people was evident in the second year students, who all showed good levels of understanding of the importance of MECC and the motivation to practice the concept - '*I know I'm trying my best to the best of my ability and to try and help people as best as I can'* [student 7]. This motivation extended to wanting to be more prepared for placements by researching signposting services so that they could put their health promotion skills into practice. It is therefore crucial that both the university curriculum

and practice placements capitalise on this motivation to provide a level of training that helps to embed it into the students' practice.

Maintaining this motivation in practice in the long term however, is crucial if the students are to continue to contribute to the public health initiative. Patten and Crutchfield (2016) found in the MECC pilot in Gosport that there was a general reduction in motivation twelve weeks after training, which they attributed to organisational issues where MECC was not embedded into the culture. In this research the time difference between training and the second questionnaire was approximately 24 weeks and motivation amongst the first years was maintained over this period. The second years' reports of their experiences of current practice however suggest that there are few professionals practicing MECC and it is not part of the culture, and there is the possibility that Patten and Crutchfield's (2016) reported waning in motivation and enthusiasm may also happen to the student nurses on qualification. This is particularly pertinent given the documented research on nurses' professional socialisation – the process whereby a novice becomes familiar with a profession and transitions into a professional practitioner – and the tendency for newly qualified nurses to settle into and conform to inherent cultures (Mooney, 2007). There was already a view from some second years that 'as a student' MECC was not their role, and even though they are enthusiastic about MECC when they qualify, there is the possibility that they could be led by the current rush culture to treat and discharge, which was also reported by Walkden and Walker (2015) amongst the physiotherapists in their research. Maintaining motivation around academic ideals when faced with clinical realities has been shown to cause newly qualified nurses moral dilemmas in practice, and it is not unusual under such circumstances for them to compromise and assimilate to the cultural norm (Hunter and Cook, 2018).

Gradual adoption of the values, attitudes and unspoken, implicit cultural influences during professional socialisation may have either positive or negative effects on ability to implement

MECC depending upon the inherent culture of an organisation. One suggestion from one second year student to try to ensure that the MECC initiative is embedded into their practice before they qualify is worthy of consideration and may help to build resilience and confidence to avoid the need to compromise in areas where there is a dissonance with academic standards. The idea of incorporating a formal MECC competence into practice placement assessments may help to reinforce the initiative prior to qualification. The lack of a national standard MECC model and consequently any standard for training means there is no previous research into the standardisation of a MECC competence in practice and thus further research would need to be carried out to ascertain whether this would have any effect on longer term practice. The idea of a MECC competence may also have the added benefit of requiring supervisors and assessors, who may not have knowledge of MECC previously, to be competent themselves in order to evaluate their nursing students, with the further advantage of increasing the numbers of nurses practising MECC within the setting. The methods used in this research using the COM-B model are transferable and could be used to evaluate any training of qualified nurses to bring them up to the required standards to assess students in MECC.

5.5 MECC in the Clinical Setting

The study has highlighted that despite a generally good level of motivation amongst the cohort, the students' actions during clinical practice placement significantly decreased following their hybrid MECC training. This is interesting since other qualitative research in this area has found at least similar levels or increases in actions post training (Dewhirst and Speller, 2015; Wills and Kelly, 2017). The influences of practice culture, the students' perceptions of opportunities to initiate a conversation, and their levels of knowledge and confidence around MECC and signposting services have already been discussed, but the complexities of the interaction in the clinical environment appear also to be affecting behaviours.

Confidence, knowledge and skills to address a poor health behaviour and its effects on health, were key to embarking on a conversation, but students also considered the potential reactions of patients when being confronted about their poor behaviours. Second year students generally did not want to approach patients who they considered were not receptive to behaviour change. Any perceived negative reactions from patients to healthy conversations affected the students' behaviours, with one changing the way she approached the subject, but most simply avoided the conversation and therefore any confrontation. These behaviours have been reported as barriers to MECC elsewhere, both anecdotally and via qualitative studies (Charlesworth et al, 2019; Limmer and Thomas, 2016; Tinati et al, 2012). Research by Aveyard et al (2012) however found that a patient's perceived motivation to quit smoking was not important in the success of BA by doctors, and thus this may mean that opportunities to implement MECC are being missed. It is possible that the students' avoidance reactions stem from a lack of confidence when faced with resistance, but this is symptomatic of insufficient knowledge and skills in tackling difficult conversations. Whilst the students were given examples during their hybrid MECC training of the types of resistance that patients display such as negativity, excuses, discounting and disagreeing, the skills to counter such resistance were not taught or practised and this appears to be a contributary factor to inaction in practice.

Gauging the potential reaction of a patient during a brief conversation is, in itself, a skill and some of the students felt that it was difficult to address poor health behaviours without having built up a relationship with the person first. Concerns around the brevity of conversations that define MECC caused some students to reflect on the advantages of having a longer conversation to build up a picture of the patient and using an holistic approach to try to understand the reasons for their poor health behaviours. The MECC initiative is a patient-centred and holistic approach (PHE, 2016a) because the patient is involved in decision making and evaluating their own motivations for behaviour change, but the opportunistic, brief style of

the interactions could be interpreted as counterintuitive to this approach. The nursing students' training addressed this holistic approach, and many felt that that the MECC approach enabled them to understand the psycho-social aspects of people's lives, which in turn helped them in discussing health behaviours. Even though a MECC conversation should not prejudge a person's social situation, some of the same students who reported a holistic approach also appeared unaware that they were giving examples of situations where they had directly judged people on discovering a poor health behaviour. Making quick judgements about people may be symptomatic of the type of short, opportunistic conversation that defines MECC and, contrary to the defined holistic approach, doesn't always provide the time for practitioners to wholly assess people's situations. This was also found by Hebron et al (2016) who reported that physiotherapists were concerned that MECC did not consider social and environmental factors and this inhibited their delivery of messages. A lack of literature relating to nurses MECC practice with respect to holistic approaches, means it is difficult to determine whether the experiences of the second years is indicative of the nursing population and whether this may also be a contributary factor to the poor action statistics by the first year students.

Existing literature suggests that some health promotion conversations are more difficult to broach than others and this can be as a result of profession, knowledge and confidence. For instance, the student nurses studied by Wills and Kelly (2017) found exercise easier to discuss than smoking or alcohol consumption and PHE and RSPH (2015) report that physiotherapists are more likely to discuss exercise than any other MECC topic. Whilst the results showed a statistically significant decrease in actions across all topic areas, the biggest effect sizes were noted in obesity and alcohol consumption, for which both showed a large decrease following training. Concerns around addressing alcohol consumption were expressed by the second years and this stemmed around their feeling that drinking is classed as socially acceptable and has been somewhat normalised. As a result, the students reported not addressing alcohol

consumption as they had effectively prejudged and determined that the patients would not be receptive to behaviour change, and this links back to the gauging of receptiveness and holistic approaches discussed above. Addressing obesity was also found to be a difficult conversation to broach, as Donovan and Paudyal (2016) also reported. Research suggests that discussing weight is sometimes only deemed appropriate if it is directly related to a presenting health complaint (Elwell et al, 2013) rather than as an opportunistic conversation and this may be related to the complexities and sensitivities around weight management and the associated potential negative impacts from such conversations (Brown and Thompson, 2007). Concerns about upsetting people appear to have influenced some of the second student nurses' approaches to discussing weight. They found these conversations difficult to broach without appearing insensitive and they generally felt uncomfortable and awkward, which was also reported by Brown and Thompson (2007). Talking to patients about healthy eating appeared to be a strategy employed by some of the second years to avoid talking about obesity directly, as it was deemed less negative than talking about being overweight.

Whilst there was a significant decrease in the actions in practice in relation to discussions regarding mental health, the second year students offered no insight that may explain this behaviour and in the absence of existing MECC research regarding this subject it is difficult to draw any conclusions about why this is the case. Further research in this area is warranted to determine what factors are inhibiting practitioners from holding such conversations. Even though the frequency of conversations regarding both exercise and smoking decreased post training, the effect sizes were moderate. Second year students reported that they found initiating and holding conversations about smoking was the easiest subject to approach in comparison to obesity and alcohol consumption. They reported that this was mainly due to the prevalence of smoking cessation campaigns and the expectation from smokers that their behaviours will be challenged, which was also reported by Donovan and Paudyal (2016) and Patten and Crutchfield (2016).

It is worthy of note that this research highlighted that age and healthcare experience levels are factors influencing student nurses' actions in practice. The responses of the youngest and least experienced students showed decreased actions across all topic areas in line with the results for the whole cohort. Conversely the 45+years age group reported no change in actions pre and post training, though the sample size for this group was small. The other age groups showed decreases across two or three topics only. It is difficult to draw any conclusions regarding the influence of age and/or experience on these results as there appears to be no comparable research from nurses using MECC. It is also not possible to draw any conclusions from the qualitative data collected as the ages of the nurses interviewed were not recorded. Further research using the MECC-RS questionnaire to gather responses from other nurses, student nurses and health professionals may identify if these results are indicative of the effects of age and experience on delivery of MECC messages across other populations and whether these are factors that should be considered when devising training schedules.

5.6 Moral Emotions

Investigating whether awareness of and feelings of shame and guilt could influence delivery of a MECC message using the validated PFQ-2a and 3PS questionnaires showed very mixed results. Prior to training, students' motivation to deliver MECC messages was not affected by their own values. With greater knowledge of MECC following their training however, feelings of guilt caused the youngest age group of students to be less motivated to discuss alcohol consumption, smoking and exercise but there was no correlation between motivation and feelings of shame around any of the MECC topics. It is possible therefore that the students either did not have feelings of shame or they did not allow the feelings to influence their motivation. Older (25-34 years) and more experienced students exhibited feelings of guilt and shame in relation to obesity and alcohol consumption, but this did not affect their

motivation in talking to patients about the behaviours. The second-year students admitted to poor health behaviours including smoking, alcohol consumption and poor diet and whilst they demonstrated levels of shame associated with this, their motivation to deliver public health messages similarly persisted. As reflective practitioners they demonstrated an acknowledgement of their own behaviours and whilst they discussed both feelings of guilt and shame there was a recognition that this should not interfere with their motivation to help others.

Feelings of guilt and shame negatively correlated with the first years' actions in practice following their training, but the associations were weak across all subject areas. Shame involves exposure of vulnerable aspects of one's self and this can reduce a person's ability to communicate as this exposure makes them feel flawed (Baldwin et al., 2006). This vulnerability was discussed by some of the second-year students, who found addressing their own poor health behaviours, especially around smoking, made them feel hypocritical when talking to patients and they indicated that they would not reveal their behaviours due to feelings of shame and hypocrisy. However several had used their own experiences and behaviours, particularly around unhealthy eating and alcohol consumption, to empathise and encourage patients to discuss behaviour change. This building of a rapport was also noted by Wills and Kelly (2017) who reported that personal experiences can help in the interaction rather than inhibit the conversation in the first place. For this to be successful across a cohort of nursing students however, there needs to be encouragement to reflect on their own health behaviours, to acknowledge where there may be elements of shame and to be taught ways to deliver messages, which they may have previously felt uncomfortable delivering.

This research showed that feelings of guilt in the clinical encounter were a factor influencing the delivery of MECC for some of the second years. For some students the fear of offending patients overrides their sense of beneficence in longer term health promotion. It may be argued that failure to deliver a MECC message, because of the guilt associated with hurting

someone's feelings or making them feel bad about themselves is, in itself, a beneficent act in the very short term but in the longer term could be construed as maleficent. As one student mentioned in free text on the questionnaire, feelings of guilt or shame should not influence delivery of a MECC message '*as long as the suggestion is being made purely in the* [patient's] *best interest'.* Indeed, the fear of offending a patient suggests a lack of understanding of the concept of asking ODQs to understand the person's circumstances and empower them to recognise their health behaviour and take action. Causing offence in the clinical encounter suggests that the practitioner may be confronting a difficult subject directly, without allowing and facilitating the person to develop their own thoughts on their lifestyle behaviours. It suggests that the students are using the informative and 'telling' approach, which reflects the Yorkshire model, and this may be somewhat a result of the teaching they received, which takes aspects of both the Wessex and Yorkshire models. Whilst the students are encouraged to use ODQs the responses of second year students suggest that there is limited understanding of the approach and they many default back to the traditional healthcare model of providing advice and instruction.

5.7 MECC Training

The results of the quantitative research suggest that there must be factors associated with the content and method of the hybrid MECC training received by the students that are resulting in a decrease in actions around MECC practice. The lack of a national MECC model and the subsequent differences in the mode and content of teaching is fundamental to the paucity of evidence relating to the effectiveness of MECC education and outcomes and this therefore provides challenges when devising a MECC training plan. Whilst there appears at first sight to be extensive evidence in relation to the Wessex model, in reality the research articles are generated from one study investigating conversations about diet and exercise in a non-clinical setting. The non-randomised control trial was conducted by Southampton University who were also responsible for devising the model and whilst the evidence suggested that the

teaching model was useful, there were no associated positive outcomes for the recipients of the advice. The Lincolnshire hybrid model advocates the use of ODQs but also teaches the students to 'Ask, Assist, Advise' and there is no other research into the effectiveness of this method of teaching. This research therefore is unique in the evaluation of this hybrid approach to MECC teaching using student nurses.

A fundamental finding of the research is that the training in the hybrid MECC model is not resulting in increased frequencies of MECC interactions in the clinical environment and that the identified barriers to implementing MECC revolve around capability, despite students reporting an increased capability post training. Specifically, confidence, knowledge and the skills to hold conversations appear to be key factors as well as the organisational culture of the practice placement. All of these factors could be addressed as part of improvements to the training schedule in the academic environment. Specifically, the reported issues around trying to embed MECC into the culture of an organisation should not apply only when the students are in practice but must also apply to the academic environment. Simulating MECC conversations into clinical skills sessions was suggested by a second-year student as a way of improving confidence and boosting knowledge and skills around holding conversations. Research should be carried out to determine if scenario-based training may be an effective method of teaching and whether it could help to consolidate the initiative with the students before they qualify. The transferability of this research to a different cohort exposed to a different training programme is worthy of consideration as currently the evidence for any method of training is lacking. Combined with opportunities in practice and the generally inherent altruistic nature of nursing students motivated to act beneficently, such teaching methods could help to elicit positive behaviours around health promotion according to the COM-B model.

5.8 Limitations of the Research

A limitation of the research, which affects the transferability of the findings, is the assessment of students who were taught a hybrid version of MECC, rather than either the Yorkshire or Wessex models. MECC training in Lincolnshire by LCC follows the same format for all organisations and therefore there is continuity at a local level, however this approach may not be replicated in other geographical regions.

The recognised global issue of attrition rates amongst nursing students (Chan et al, 2019) is reflected in the reduction of student nurse numbers during the period between first and second questionnaire completion, by a total of 26 adult nursing students representing 13.6% of the cohort. This, combined with student absence during the second questionnaire session, reduced the available sample on which to undertake paired sample analysis. Data analysis of subgroups, for instance age groups, highlighted differences in sample sizes, particularly in the older groups where the number of respondents were small, although no sample size calculations are included. Reporting of the statistical analyses included a comment on sample size where appropriate and throughout these were recognised and incorporated in the interpretation of the findings.

A limitation of this research is the lack of a control group, who had not received training, against which the effects of the training intervention could be measured. A control group in this situation was not possible as all student nurses were required to attend the training as part of their curriculum. Also whilst the two student cohorts had studied the same curriculum, the second year students who participated in the qualitative research had one more year of experience of academic teaching and placements and whilst they were exposed to similar course content and placement types their experiences cannot directly explain the first years' quantitative results. Following the collection of the data sets for this research, the teaching

of MECC at University of Lincoln has also changed in line with the changed NMC Education Standards and therefore this affects any direct comparison with subsequent cohorts in any future research.

The pilot questionnaire returned data that provided valuable information on the amount of time needed to complete the questionnaires and some transcription errors. It also highlighted areas where formatting improvements could be made and areas where changes to wording could improve cognition and comprehension. It is recognised however that there was a low response rate on the pilot questionnaire and had there been a better uptake this may have improved the questionnaires further, which may have reduced the levels of noted survey fatigue and missing data. A further limitation was the disappointing low numbers of questionnaires returned by the mental health student nurses, notwithstanding the substantially smaller cohort size, despite efforts to capture as much data as possible. This resulted in a large difference in sample size with the adult student nurses that could be considered as an inequality in the datasets (Cresswell and Cresswell, 2018) and meant that comparison of the datasets was not possible.

The content validity of the PFQ2(a) questionnaire was asserted by Harder et al (1993) but the MECC-RS and 3PS questionnaires were devised specifically for the research and are not validated. Responses to the MECC-RS and 3PS questionnaires showed some evidence of students demonstrating questionnaire fatigue, despite efforts to mitigate this. The use of Likert scales may also have introduced some subjectivity to the quantification of frequencies between different groups, though at an individual level this is somewhat addressed by the use of paired samples. There is an inevitable introduction of bias in the closed questions used as this forces respondents to answer within pre-defined parameters and removes spontaneity and expressiveness (Oppenheim, 1992: 114) and the removal of the neutral/uncertain response from the actions scale on the MECC-RS questionnaire also results in a 'forced choice', which could affect the results.

The independent quality check of the data input to SPSS was only a small sample of the whole and given the amount of quantitative data collected there is the possibility that some data were incorrectly input. Also, whilst the coding of the qualitative data was discussed in the early stages with other researchers, the refining of codes and development of themes was completed by the author alone and this may have introduced bias. It is also noted that some of the initial literature review was conducted prior to the thematic analysis and this may have biased the inductive nature of the analysis.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

This research set out to evaluate the values, experiences, training and behaviours of nursing students around the hybrid MECC initiative. The students reported being generally motivated to practice MECC, but despite receiving training in the initiative they also reported that they were not putting their knowledge into practice. Whilst knowledge, including of signposting services, was considered important the students demonstrated that both confidence and skills to initiate and maintain a conversation were crucial, and a lack of these factors seemed to be a barrier to their public health promotion actions in the clinical setting. The academic MECC training the students received appears not to have completely equipped the students for practice and unless the initiative is embedded during their academic studies it is possible that the students will not translate their knowledge into practice on qualification. Organisational culture, the students' role identity and the actions of supervisors and assessors are influential in students' own actions, and the students' experiences of MECC in practice suggest that healthcare professionals are either unaware of MECC or are generally not practising it. Based on research around professional socialisation, there is the strong likelihood that the students are likely to default to these cultural norms on qualification, and where MECC is not embedded this may have a detrimental impact on their public health promotion activities.

Whilst the students are likely to have similar poor health behaviours to the general population, feelings of guilt and shame did not influence the students' motivation to deliver MECC messages, though there were weak associations both positively and negatively around delivery of different health behaviour messages in practice. In general, shame around the students' own poor health behaviours did not stop them from MECC, but feelings of guilt and a lack of appropriate skills and knowledge around dealing with difficult conversations appears to be a barrier to their health promotion practice.

Based on the research findings it is evident that the hybrid MECC training programme is not meeting the aims of improving health promotion in practice. Whilst the organisational culture of the practice placements cannot be changed in the short term, the content and/or delivery of MECC education in the academic setting can be modified to better suit the needs of the students to improve the delivery of MECC and this must be considered important in the context of health promotion in the county.

Due to the paucity of literature relating to the implementation of the MECC initiative, particularly in relation to the nurse's role further research in this area is recommended. The MECC-RS and PFQ2(a) questionnaires could be useful tools in evaluating the pre and post MECC training of other populations to improve the evidence base for this initiative. It is recommended that the methods used in this research are transferred to other cohorts of students receiving MECC training, both in the University of Lincoln and other academic institutions to evaluate whether these findings are representative of other public health teaching and of nursing students in general. Further qualitative research to investigate potential changes to the delivery and/or content of the curriculum to improve student confidence, skills and knowledge around MECC are also recommended to improve the students' capability for practice placement. This should include investigating further the influences of the placement environment on students with the aim of seeking solutions to the identified problems expressed by students in the clinical setting.

The methods used here can be further employed to evaluate the capability, opportunity, motivation and actions of qualified nurses to determine the extent of MECC delivery and to try to identify any barriers and enablers to implementing it in practice. Widening the research to encompass qualified staff would add valuable insight to the currently weak evidence base around MECC and the role of nurses in the initiative. It is hoped that in the long term, further research using these methods and the results of this study will strengthen the evidence base

and will be used to improve the quality of health promotion training for the benefit of the general population and the NHS nationally.

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APPENDIX 1

PILOT QUESTIONNAIRES

MH$_2$aSC

UNIVERSITY OF LINCOLN

Ethics Ref: 2019- Feb-0158

The following three short scales are designed to help us obtain some information about your response to the 'Making Every Contact Count' (MECC) agenda. You will have been introduced to this approach and have had the opportunity to have a MECC conversation in clinical practice. These scales are designed to help explore your feelings about this initiative and your practice. Please answer all questions. *There are no right or wrong answers* so there is no need to think too hard, just *go with your initial response* to the questions.

ID: ___/___

1. Age Category (please tick one):

18-24	1 ☐
25 - 34	2 ☐
35 - 44	3 ☐
45 - 54	4 ☐
55+	5 ☐

2. How many years' experience do you have in **formal health care giving**? (Please tick one)

Less than a year	1 ☐
1 to 2 years	2 ☐
2 + years to 5 years	3 ☐
5 + years to 10 years	4 ☐
10 + years	5 ☐

3. Field of Nursing

Adult	☐
Mental health	☐

Making Every Contact Count Review Scale (MECC-RS)

Please answer all 15 stem questions. All answers should be based on your recent clinical interactions
Stem questions (Centre Column): contains the core questions about each of the lifestyle behaviours covered by MECC
Perceptions Scale (Left Hand Side): asks how motivated and able you feel to incorporate MECC into your practice with respect to each of the behaviours in the Stem column
Actions Scale (Right Hand Side): asks how far you are actually putting MECC into practice with respect to each of the behaviours in the Stem column

It is very important to make a score on each question (Perceptions) and (Actions).

The '**Perceptions**' scale is divided into three possible response sets (CRs; ORs and MRs). It is important to answer each stem question with a ✓ or X in one CR column (green); one OR column (blue) and one MR column (pink) (as in the example below). You should have 3 . ✓ or X on the left-hand side.

For the '**Actions**' scale please indicate on the scale with ONE✓ or X for each stem question.

If you make a mistake in either or both of the scales simply put a line through the mark and answer again (~~✓~~ or an ~~X~~).

Example with dummy question:

	PERCEPTIONS SCALE			**STEM QUESTIONS**		**ACTIONS SCALE**				
Your thoughts about this topic						**Your actual practice**				
CR		**OR**		**MR**						
I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role	I do this at every opportunity	I sometimes forget	I am not sure I am the best person to do this	Sometimes but I find it challenging	I avoid doing this as it is too difficult
✓		✓			✓	**Q1:** I ask patients if they smoke and indicate the possible associated health risks			✓		

	PERCEPTIONS SCALE			STEM QUESTIONS		ACTIONS SCALE				
	Your thoughts about this topic					Your actual practice				
	CR		OR		MR					
	I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role	I do this at every opportunity	I sometimes forget	I am not sure I am the best person to do this	Sometimes but I find it challenging	I avoid doing this as it is too difficult
							Q1: I ask patients if they smoke and indicate the possible associated health risks				
							Q2: When talking with a patient who smokes, I ask if they have considered getting help to quit				
							Q3: When talking with a patient who smokes, I signpost them to information and services that may help them quit.				
							Q4: I ask patients if they consider themselves overweight and indicate the possible health /social risks associated with this				
							Q5: When talking with a patient who is overweight, I ask if they have considered getting help to manage their weight.				
							Q6: When talking with a patient who is overweight, I signpost them to weight loss programmes and information				

	PERCEPTIONS SCALE					STEM QUESTIONS		ACTIONS SCALE				
	Your thoughts about this topic							Your actual practice				
	CR		OR		MR							
	I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role		I do this at every opportunity	I sometimes forget	I am not sure I am the best person to do this	Sometimes but I find it challenging	I avoid doing this as it is too difficult
							Q7: I ask patients if they drink above recommended guidelines. I indicate the possible health risks of this					
							Q8: When talking with a patient who drinks above guideline levels, I ask if they have considered getting help.					
							Q9: When talking with a patient who drinks above guideline levels, I signpost them to information or services that may help.					
							Q10: I ask patients if they take regular exercise. I indicate the health risks of not doing this					
							Q11: When talking with a patient about exercise, I ask if they have considered doing more.					
							Q12: When talking with a patient about exercise, I signpost them to groups/ activities or information					

	PERCEPTIONS SCALE					STEM QUESTIONS		ACTIONS SCALE				
	Your thoughts about this topic							Your actual practice				
	CR		OR		MR							
	I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise		I do this at every opportunity	I sometimes forget	I am not sure I am the best person to do this	Sometimes but I find it challenging	I avoid doing this as it is too difficult
							Q13: I ask patients about their mental health					
							Q14: When talking with a patient about depression and/or anxiety, I ask if they ever consider accessing services.					
							Q15: When talking with a patient about depression and/or anxiety, I signpost them to services that may help.					

PFQ-2(a)

Instructions:
This questionnaire examines your feelings regarding the health promotion agenda within Making Every Contact Count (MECC). Please indicate the degree to which you currently feel each of the emotions listed below when you think about encouraging or asking patients /clients/service users to change their behaviour. Read each item and then mark the appropriate answer in the space next to the word. Use the following scale to record your answers. Please answer each of the 22 questions with a number.

4 = I experience this feeling ***very strongly***
3 = I experience this feeling ***strongly***
2 = I experience this feeling ***moderately***
1 = I experience this feeling ***a little bit***
0 = I ***do not experience*** the feeling

__ 1. Embarrassment

__ 2. Mild guilt

__ 3. Feeling ridiculous

__ 4. Worry about hurting someone

__5. Sadness

__ 6. Self-consciousness

__ 7. Feeling humiliated

__ 8. Intense guilt

__ 9. Euphoria

__ 10. Feeling “stupid”

__ 11. Regret

__ 12. Feeling “Childish”

__ 13. Mild happiness

__ 14. Feeling helpless, paralysed

__ 15. Depression

__ 16. Feelings of blushing

__ 17. Feeling you deserve criticism

__ 18. Feeling laughable

__ 19. Rage

__ 20. Enjoyment

__ 21. Feeling disgusting to others

__ 22. Remorse

3PS

Read through each of the statements and answer each one. There are no right or wrong answers so please go with your initial thought. To help you answer, think about a MECC event with a service user/patient and reflect on *how you think they were feeling.*

This scale uses a 'Likert' (0-4) scale

0 – I *never* think this
1 – I *rarely* think this
2 – I *sometimes* think this
3 – I think this *most of the time*
4 – I think this *absolutely on every occasion*

When talking with patients/service users about healthy life-style choices or giving life-style advice, I think…

	Never	Rarely	Sometimes	Most of the time	Absolutely every occasion
It is not my place to do so because they don't want me to					
That patients are embarrassed to talk with me about this					
Such talk just adds to patients feeling depressed about their situation					
Patients aren't that bothered either way					
Patients are often not in a position to make changes due to economic or other material circumstances					
I am making them feel guilty about their situation					
I am making them feel ashamed of their situation					
The patients are happy the way they are					
I am adding to their stress					
It is the role of their family or friends to do this					
I am imposing my values on them					
They don't have the motivation to change					
They may feel I am judging them					

Thank you for completing these questionnaires

QUESTIONNAIRE PILOT

Thanks for taking the time to help with piloting the three questionnaires regarding MECC.

Your answers WILL NOT be used in any research. This exercise is purely to find out if the questionnaires are suitable for use with first year nursing students. We simply need to know how well or not the questionnaires work.

Please fill out the questionnaires as best you can. In order for us to understand if the questionnaire is working please can you answer the following:

From which Uni did you gain your nursing degree?
……..

Have you received teaching about MECC?. YES/NO/DON'T KNOW

Approx how long did it take you to complete the questionnaires?
.....

Please feel free to write any comments below OR on the questionnaires about:

- questionnaire design
- problems with answering questions
- anything that is unclear
- any further comments

THANKS!!

APPENDIX 2

FEEDBACK AND OBSERVATIONS FROM PILOT QUESTIONNAIRES

Questionnaire number	University	MECC training received?	Time to complete/ mins	Feedback and observations
1	Lincoln	Yes	15	Completed MECC-RS correctly including correcting mistake as directed. PFQ-2(a) completed correctly. 3PS. Respondent used Likert scale numbers in the boxes rather than ticks.
2	Lincoln	Don't know	5	MECC-RS perceptions scale completed incorrectly. Only one coloured column completed for each question. Predominantly OR column but CR column for one question. Verbal comment that action scales headings confusing. PFQ-2(a) completed correctly. 3PS. One question omitted in error? On purpose?
3	Lincoln	Yes	10 (had distractions)	Completed MECC-RS correctly. Respondent noted a mistake in transcription on page 5 where column titles for MR were incorrect PFQ-2(a) completed correctly. 3PS – respondent questioned whether they were to use tick box or insert Likert scale.
4	Lincoln	Yes	15	Completed MECC-RS correctly (though one answer scribbled through rather than crossed out) PFQ-2(a) completed correctly. 3PS all questions answered. Some mistakes scribbled out and other option selected.
5	Lincoln	Yes	No time indicated	Missed one response for OR Qu6. Note from participant stating that the Actions scale was confusing. PFQ-2(a) completed correctly. 3PS all questions answered.

APPENDIX 3

FINAL QUESTIONNAIRES

MH$_2$aSC

UNIVERSITY OF LINCOLN

Ethics Ref: 2019- Feb-0158

Contact Count (MECC) agenda. You may have been introduced to this approach and may have had the opportunity to have a MECC conversation in your clinical practice. These scales are designed to help explore your feelings about public health promotion and your practice. Please answer all questions. *There are no right wrong answers* so there is no need to think too hard, just *go with your initial response* to the questions.

ID: ___/___

1. Age Category (please tick one):

18 - 24	1 ☐
25 - 34	2 ☐
35 - 44	3 ☐
45 - 54	4 ☐
55+	5 ☐

2. How many years' experience do you have in **formal health care giving** i.e as a paid employee? (Please tick one)

Less than a year	1 ☐
1 to 2 years	2 ☐
2 + years to 5 years	3 ☐
5 + years to 10 years	4 ☐
10 + years	5 ☐

3. Field of Nursing

Adult	☐
Mental health	☐

4. Where was your last nursing placement? .....

Questionnaire 1: Making Every Contact Count Scale (MECC-RS)

Please answer all 15 stem questions. All answers should be based on your recent clinical interactions
Stem questions (Centre Column): contains the core questions about each of the lifestyle behaviours covered by MECC
Perceptions Scale (Left Hand Side): asks how motivated and able you feel to incorporate MECC into your practice with respect to each of the behaviours in the Stem column
Actions Scale (Right Hand Side): asks how far you are actually putting MECC into practice with respect to each of the behaviours in the Stem column

<u>It is very important to make a score on each question (Perceptions) and (Actions).</u>

The '**Perceptions**' scale is divided into three possible response sets (CRs; ORs and MRs). It is important to answer each stem question with a ✓ or X in one CR column (green); one OR column (blue) and one MR column (pink) (as in the example below). You should have 3 . ✓ or X on the left- hand side.

For the '**Actions**' scale please indicate on the scale with ONE✓ or X for each stem question.

If you make a mistake in either or both of the scales simply put a line through the mark and answer again (~~✓~~ or an ~~X~~).

Example with dummy question:

	PERCEPTIONS SCALE			**STEM QUESTIONS**		**ACTIONS SCALE**		
Your thoughts about this topic					**Your actual practice**			
CR		**OR**		**MR**				
I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role	I frequently do this	I do this more often than not	I do this infrequently	I rarely/never do this
✓		✓			✓	**Q1:** I ask patients if they smoke and indicate the possible associated health risks		✓		

	PERCEPTIONS SCALE			STEM QUESTIONS		ACTIONS SCALE			
Your thoughts about this topic						Your actual practice			
CR		OR		MR					
I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role	I frequently do this	I do this more often than not	I do this infrequently	I rarely/never do this

	PERCEPTIONS SCALE					STEM QUESTIONS		ACTIONS SCALE			
	Your thoughts about this topic							Your actual practice			
	CR		OR		MR						
	I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role		I frequently do this	I do this more often than not	I do this infrequently	I rarely/never do this
							ALCOHOL				
							Q8: When talking with a patient who drinks above guideline levels, I ask if they have considered getting help.				
							Q9: When talking with a patient who drinks above guideline levels, I signpost them to information or services that may help.				
							EXERCISE				
							Q10: I ask patients if they take regular exercise. I indicate the health risks of not doing this				
							Q11: When talking with a patient about exercise, I ask if they have considered doing more.				
							Q12: When talking with a patient about exercise, I signpost them to groups/ activities or information				
							MENTAL HEALTH				
							Q13: I ask patients about their mental health				
							Q14: When talking with a patient about depression and/or anxiety, I ask if they ever consider accessing services.				

PERCEPTIONS SCALE						STEM QUESTIONS	ACTIONS SCALE			
Your thoughts about this topic							Your actual practice			
CR		OR		MR						
I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role	MENTAL HEALTH	I frequently do this	I do this more often than not	I do this infrequently	I rarely/never do this
						Q15: When talking with a patient about depression and/or anxiety, I signpost them to services that may help.				

Questionnaire 2: 3PS

Read the sentence in bold below and based on this provide an answer for each of the statements in the table. There are no right or wrong answers so please go with your initial thought. To help you answer, think about a MECC event with a service user/patient and reflect on *how you think they were feeling.*

When talking with patients/service users about healthy life-style choices or giving life-style advice, I think……

	Never	Rarely	Sometimes	Most of the time	Absolutely every occasion
I am making them feel ashamed of their situation					
Patients are often not in a position to make changes due to economic or other material circumstances					
It is my place to do so because they want me to					
I am imposing my values on them					
They may feel I am judging them					
They are questioning my own lifestyle choices					

Questionnaire 3: PFQ-2(a)

Instructions:
This questionnaire examines your feelings regarding health promotion within MECC. Please indicate the degree to which you currently feel each of the emotions listed below when you think about encouraging or asking patients /clients/service users to change their behaviour. Read each item and then mark the appropriate answer in the space next to the word. Use the following scale to record your answers. Please answer each of the 22 questions with a number.

4 = I experience this feeling ***very strongly***
3 = I experience this feeling ***strongly***
2 = I experience this feeling ***moderately***
1 = I experience this feeling ***a little bit***
0 = I ***do not experience*** the feeling

__ 1. Embarrassment
__ 2. Mild guilt
__ 3. Feeling ridiculous
__ 4. Worry about hurting someone
__5. Sadness
__ 6. Self-consciousness
__ 7. Feeling humiliated
__ 8. Intense guilt
__ 9. Euphoria
__ 10. Feeling “stupid”
__ 11. Regret
__ 12. Feeling “Childish”
__ 13. Mild happiness
__ 14. Feeling helpless, paralysed
__ 15. Depression
__ 16. Feelings of blushing
__ 17. Feeling you deserve criticism
__ 18. Feeling laughable
__ 19. Rage
__ 20. Enjoyment
__ 21. Feeling disgusting to others
__ 22. Remorse

THANK YOU FOR COMPLETING THESE QUESTIONNAIRES!

APPENDIX 4

CONSENT FORM

Project ID: 2019-Feb-0158

Participant Identification Number for this study:

UNIVERSITY OF LINCOLN

CONSENT FORM

(Final Version 2.0: 19 February 2019)

Title of Project: Evaluation of the values, experiences and behaviour of nursing students in promoting healthy lifestyles using the 'Making Every Contact Count' (MECC) initiative. Questionnaire participants

Name of Researcher: Dr Ian McGonagle, Caroline Hendry, Vanessa Tindale

Name of Participant:

Please initial box

1. I confirm that I have read the information sheet dated 19 February 2019 (version 2.0) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my legal rights being affected. I understand that should I withdraw then the information collected so far may not be erased and that this information may still be used in the project analysis. ☐

3. I understand that relevant sections of data collected during the study, may be looked at by individuals from the University of Lincoln, from regulatory authorities, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records, I understand that my personal details will be kept confidential. ☐

4. (If appropriate) I understand that the information collected about me will be used to support other research in the future, and may be shared anonymously with other researchers. OPTIONAL ☐

5. I would like to receive a summary of the results of the study Yes ☐ No ☐

6. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Name of Person taking consent	Date	Signature

APPENDIX 5

PARTICIPANT INFORMATION SHEET-QUESTIONNAIRE

Participant Information Sheet/Information about the research
(Final version 1.0: 11 February 2019)
Ethics Ref: 2019- Feb-0158

UNIVERSITY OF LINCOLN

Title of Study: The values, experience and behaviour of nursing students in promoting healthy lifestyles using the 'Making Every Contact Count' initiative: Questionnaire participants

Name of Researcher(s): Our project team comprises Dr Ian McGonagle, Caroline Hendry and Vanessa Tindale (Research Masters student).
Contact Details of the Researcher(s) are given at the end.

We'd like to invite you to take part in our research study. Joining the study is entirely up to you, before you decide we would like you to understand why the research is being done and what it would involve for you. One of our team will go through this information sheet with you, to help you decide whether or not you would like to take part and answer any questions you may have. We'd suggest this should take about between 10 and 20 minutes. Please feel free to talk to others about the study if you wish.

What is the purpose of the study?

To find out about nursing students values, experiences and behaviours with regard to public health interventions with patients, with the aim of evaluating the effectiveness of the educational intervention. The findings of this project will form part of a Masters dissertation.

The project has different components and you are being invited to take part in completing questionnaires. There are three questionnaires to complete and you will be asked to complete all three on two separate occasions during the academic year. We will also seek publication of academic research papers and dissemination at regional, national and international conferences.

Why have I been invited?

You have been invited to participate because you are a first year nursing student and have or will receive training in the MECC health promotion initiative in the very near future

Where?
We would like you to complete a short questionnaire before one of your lectures. The teaching team have been contacted and are happy to provide us with 30 minutes of your allocated time.

Why have I been invited?

As noted above, you are engaged, or soon to be engaged in a public health teaching initiative and we are exploring the effectiveness of this element of your studies in nursing practice. We are contacting all members of your nursing cohort to request their involvement and will ask you all to consider completing the questionnaire over two time periods, Part 1 in the near future and again at part two following your next clinical placement.

Do I have to take part?

Your participation is entirely voluntary. You can withdraw at any time, without giving a reason. Withdrawal from this study will not affect any you in any way, but the information you have

provided up to the point of withdrawal may still be used. This is because once data analysis has commenced, it is not possible to remove individual data as these are anonymised.

What will happen to me if I take part?

You will be invited to complete the questionnaires during one of your timetabled lectures. The questionnaires take approx. 10-20 minutes to complete. Later in the academic year the process will be repeated and you will be asked to complete part two of the questionnaires again after your next clinical placement.
The questionnaire asks you about your values, knowledge and actions about public health in your pre-registration nursing practice. There are no right or wrong answers and we will not be asking questions on sensitive topics.

Expenses and payments

Participants will not be paid to participate in the study, however we will conduct a 'prize draw' with the chance of winning one of 5 Amazon vouchers (with a value of £5.00) for those participants who provide two sets of questionnaire responses (part one and part two).

What are the possible benefits of taking part?

We cannot state there will be direct benefits to you, but your will be contributing to our understanding of the public health role and actions of the nursing profession.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you, or that you choose to share, will be anonymised and handled in confidence.

Privacy notice

The University of Lincoln is the lead organisation for this study. The university's Research Participant Privacy notice https://ethics.lincoln.ac.uk/research-privacy-notice/ will explain how we will be using information from you in order to undertake this study and will be the data controller for this study. This means that we are responsible for looking after your information and using it properly.

We will keep identifiable information about you for 1 year after the study has finished.

What will happen if I don't want to carry on with the study?

Your participation is voluntary and you are free to withdraw at any time, without giving any reason, and without your legal rights being affected. If you withdraw from the study, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally-identifiable information possible.

What will happen to the results of the research study?

A report on the results of the study will be provided for the regional Public Health commissioning group to help to improve the evidence-base for the MECC initiative. It will also inform part of a Masters by Research dissertation. It is intended to write up the results in an academic research paper and disseminate findings at national and international conferences.

Participants will be kept fully informed of any final outputs from the research and will be offered the opportunity to receive a copy of the final report.

Who is organising and funding the research?

This research is being organised by the University of Lincoln and is being funded by Lincolnshire County Council.

Who has reviewed the study?

All research conducted by the University of Lincoln is looked as by an independent group of people, called a Research Ethics committee, to protect your interests.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. The researchers contact details are given at the end of this information sheet. If you remain unhappy and wish to complain formally, you can do this by contacting ethics@lincoln.ac.uk.

If you feel that we have let you down in relation to your information rights then please contact the Information Compliance team by email on compliance@lincoln.ac.uk or by post at Information Compliance, Secretariat, University of Lincoln, Brayford Pool, Lincoln, LN6 7TS.

You can also make complaints directly to the Information Commissioner's Office (ICO). The ICO is the independent authority upholding information rights for the UK. Their website is ico.org.uk and their telephone helpline number is 0303 123 1113.

Further information and contact details

If you have a concern about any aspect of this study, please contact one of the following:

- Dr Ian McGonagle imcgonagle@lincoln.ac.uk (01522 837739)
- Caroline Hendry chendry@lincoln.ac.uk (01522 837783)

If you remain unhappy and wish to complain formally, you can do this by contacting ethics@lincoln.ac.uk

APPENDIX 6

POWERPOINT PRESENTATION-QUESTIONNAIRE

Evaluating the values, experiences and behaviour of nursing students in promoting healthy lifestyles

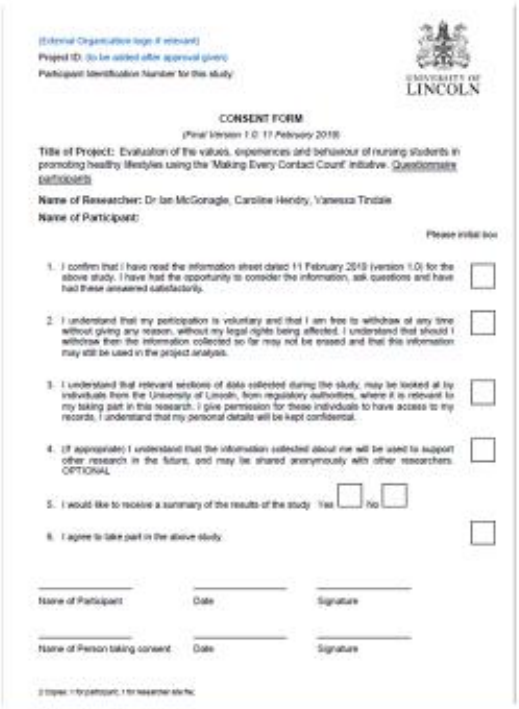
DR IAN MCGONAGLE
VANESSA TINDALE

ETHICS REF: 2019- FEB-0158

- Research on behalf of the local Public Health Commissioning Group
- Collecting data about the values, experiences and behaviours of nursing students regarding public health promotion
- Participation is voluntary
- If you decide to participate you will be contributing to our understanding of the public health role and actions of the nursing profession.
- Three questionnaires now. Process repeated later in the academic year.
- 'Prize draw' for Amazon vouchers for participants completing questionnaires on both occasions

Participant Information Sheet

Consent form



(External Organisation logo if relevant)

Project ID: (to be added after approval given)

Participant Identification Number for this study:

UNIVERSITY OF LINCOLN

CONSENT FORM

(Final Version 1.0: 11 February 2018)

Title of Project: Evaluation of the values, experiences and behaviour of nursing students in promoting healthy lifestyles using the 'Making Every Contact Count' initiative. Questionnaire participants

Name of Researcher: Dr Ian McGonagle, Caroline Hendry, Vanessa Tindale

Name of Participant:

Please initial box

1. I confirm that I have read the information sheet dated 11 February 2018 (version 1.0) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my legal rights being affected. I understand that should I withdraw then the information collected so far may not be erased and that this information may still be used in the project analysis. ☐
3. I understand that relevant sections of data collected during the study, may be looked at by individuals from the University of Lincoln, from regulatory authorities, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. I understand that my personal details will be kept confidential. ☐
4. (If appropriate) I understand that the information collected about me will be used to support other research in the future, and may be shared anonymously with other researchers. OPTIONAL ☐
5. I would like to receive a summary of the results of the study Yes ☐ No ☐
6. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Name of Person taking consent	Date	Signature

2 copies: 1 for participant; 1 for researcher site file

Front Sheet – Demographic Information

MH$_2$aSC

UNIVERSITY OF LINCOLN

The following three short questionnaires are designed to help us obtain some information about your understanding of public health promotion. You may have been introduced to the concept of public health and may have had the opportunity to have conversations about health promotion in your clinical practice. These scales are designed to help explore your feelings about public health promotion and your practice. Please answer all questions. *There are no right wrong answers* so there is no need to think too hard, just *go with your initial response* to the questions.

ID: ___/___

1. Age Category (please tick one):

18 - 24	1 ☐
25 - 34	2 ☐
35 - 44	3 ☐
45 - 54	4 ☐
55+	5 ☐

2. How many years' experience do you have in **formal health care giving**? (Please tick one)

Less than a year	1 ☐
1 to 2 years	2 ☐
2 + years to 5 years	3 ☐
5 + years to 10 years	4 ☐
10 + years	5 ☐

3. Field of Nursing

Adult	☐
Mental health	☐

Questionnaire 1: MECC-RS

PERCEPTIONS SCALE						STEM QUESTIONS	ACTIONS SCALE			
Your thoughts about this topic							Your actual practice			
CR		OR		MR						
I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role		I frequently do this	I do this more often than not	I do this infrequently	I rarely/never do this
✓		✓			✓	**Q1:** I ask patients if they smoke and indicate the possible associated health risks		✓		

Example of completed Questionnaire 1: MECC-RS

PERCEPTIONS SCALE						STEM QUESTIONS	ACTIONS SCALE			
Your thoughts about this topic							Your actual practice			
CR		OR		MR						
I do not have the skills to do this	I feel I am sufficiently skilled to do this	The opportunity to do this does not arise	There are lots of opportunities to do this	I think this is not really my role	I am passionate that this is my role	SMOKING	I frequently do this	I do this more often than not	I do this infrequently	I rarely/never do this
	✓	✓			✓	**Q1**: I ask patients if they smoke and indicate the possible associated health risks	✓			
	✓		✓	✓		**Q2:** When talking with a patient who smokes, I ask if they have considered getting help to quit		✓		
	✓	✓			✓	**Q3:** When talking with a patient who smokes, I signpost them to information/services that may help them quit.	✓			
						OBESITY				
	✓		✓		✓	**Q4**: I ask patients if they consider themselves overweight and indicate the possible associated health /social risks			✓	
	✓	✓		✓		**Q5:** When talking with a patient who is overweight, I ask if they have considered getting help to manage their weight.		✓		
✓			✓	✓		**Q6:** When talking with a patient who is overweight, I signpost them to weight loss programmes and information				✓
						ALCOHOL				
	✓	✓			✓	**Q7:** I ask patients if they drink above recommended guidelines. I indicate the possible health risks of this	✓			

Questionnaire 2: 3PS

When talking with patients/service users about healthy life-style choices or giving life-style advice, I think……

	Never	Rarely	Sometimes	Most of the time	Absolutely every occasion
It is not my place to do so because they don't want me to					
Patients are often not in a position to make changes due to economic or other material circumstances					
I am making them feel ashamed of their situation					
I am imposing my values on them					
They may feel I am judging them					
They are questioning my own lifestyle choices					

Questionnaire 3: PRQ- 2(a)

4 = I experience this feeling ***very strongly***
3 = I experience this feeling ***strongly***
2 = I experience this feeling ***moderately***
1 = I experience this feeling ***a little bit***
0 = I ***do not experience*** the feeling

When encouraging or asking patients/clients/service users to make a behaviour change I .....

___1. Feel Embarrassed
___2. Feel Mild guilt
___3. Feel ridiculous
___4. Worry about hurting someone
___5. Feel Sadness
___6. Am Self-conscious
___7. Feel humiliated
___8. Feel Intense guilt
___ 9. Am Euphoric
___ 10. Feel "stupid"
___ 11. Have Regret
___ 12. Feel "Childish"
___ 13. Feel Mild happiness
___ 14. Feel helpless, paralysed
___ 15. Have feelings of Depression
___ 16. Have feelings of blushing
___ 17. Feel I deserve criticism
___ 18. Feel laughable
___ 19. Feel Rage
___ 20. Have feelings of enjoyment
___ 21. Feel disgusting to others
___ 22. Am Remorseful

APPENDIX 7

UNIVERSITY OF LINCOLN DATA MANAGEMENT POLICY

ACADEMIC POLICY FRONT COVER SHEET

UNIVERSITY OF LINCOLN

Name of Policy:	Research Data Management Policy
Scope of Policy:	The policy sets out the University's expectations for the management and curation of research data across all academic disciplines and in all forms
Author:	The policy is owned by the Deputy Vice Chancellor (Research and Innovation) and was drafted by the Chair of the Research Data Management Working Group
Applicable to:	All staff and students
Consultation Process:	The policy supersedes the university's policy approved by Academic Board on 16 April 2016. The revised policy was agreed by the Research Data Management Group and discussed and endorsed by the Research Committee in May 2018.
Approval Body:	Academic Board
Date of Approval:	20 June 2018
Date of Implementation (if different from date of approval):	20 June 2018
Review Date:	June 2021
Version:	University of Lincoln Version 2.0 25 May 2018
Contact for Further Information:	Professor Graham Law glaw@lincoln.ac.uk 01522 835762

Research Data Management Policy

Version 2.0

Date: 25 May 2018

The purpose of this policy is to set out the University's expectations for the management and curation of research data across all academic disciplines and in all forms. The University recognises the value of sharing research data openly where appropriate as a way to promote scholarly discourse and support learning and teaching and therefore aspires to be a leader in open data practices.

This policy is applicable to all staff and students and should be read in conjunction with the University's **Code of Practice for Research**, which reflects the principles and commitments outlined in the **Concordat to Support Research Integrity**, the University's **Open access publications policy** and **Research Ethics Policy**.

The University of Lincoln recognises that the curation and sharing of research data is key to its mission to develop and create knowledge. This brings benefits to the University, its members and the public through greater opportunities for access and re-use. Research data is defined as data acquired or generated in the course of research undertaken at the University and its management refers to storage, preservation, discovery, and provision for access and re-use.

The University recognises and supports the UK Research & Innovation Common Principles[1] on Data Policy mandates as best practice for data curation and sharing.

This policy aims to address the requirements of researchers, the public, funding and statutory bodies and commercial partners and set out the principles to ensure that research data will be managed, curated and shared to the highest standards throughout the research data lifecycle.

1. Researchers should consider data creation, management and sharing in a 'Data Management Plan (DMP)' which should explicitly address data capture, protection, management, integrity, confidentiality, evaluation, retention, sharing and publication. DMPs should take into consideration compliance with relevant legislative frameworks which may limit public access to data (e.g. in areas of data protection (point 5), intellectual property and human rights). Further details on DMPs are available from the Digital Curation Centre[2].

2. While a DMP, or its equivalent, is sometimes a requirement of the research funding, it is considered best practice for all research.

3. Responsibility for research data management through a sound DMP during any research project or programme lies primarily with the researchers.

4. The University will provide training, guidance and support for the development of DMPs or its equivalent and their implementation.

[1] UKRI Common Principles on Data Management https://www.ukri.org/funding/information-for-award-holders/datapolicy/common-principles-on-data-policy/

[2] Digital Curation Centre http://www.dcc.ac.uk/resources/data-management-plans

5. Where research data may contain personal information about identifiable individuals, the relevant data protection laws must be considered and a **Data Protection Impact Assessment** (DPIA) may need to be conducted in collaboration with the University's Data Compliance Officer prior to any personal data being collected.

6. Researchers should record the existence of research data upon creation or access and deposit it according to their plan. This should be in compliance with timeframes for preserving access that are part of the external contract (often within six months of publication of research findings).

7. Research metadata will be published (where appropriate) for permanent citation in the Lincoln Repository alongside conventional outputs such as journal articles and conference papers where appropriate.

8. Access to research data will be granted under appropriate safeguards according to conditions and timeframes specified by researchers, commercial partners and funding bodies.

9. It is the responsibility of the researcher to ensure all research data that support and substantiate published research findings are offered to an appropriate repository for long term storage and public access, where permitted. This may be funder or discipline specific, or, where no external repository has been identified, may be within University storage facilities.

The University aims to provide the infrastructure and expertise for long-term curation, preservation and access to research data. This includes secure services for storage, backup, registration, deposit and retention of research data assets in support of current and future access, during and after completion of research projects.

Costs to meet the specific requirements of Data Management Plans should be included in grant applications, where permitted. The University will develop appropriate plans and budgets for meeting the costs of long-term storage, preservation and curation of research data.

APPENDIX 8

FOCUS GROUP SCHEDULE

MAKING EVERY CONTACT COUNT PROJECT
Ethics Ref: 2019- Feb-0158

FOCUS GROUPS
2ND YEAR NURSING STUDENTS

The values, experiences and behaviours of nursing students in promoting healthy lifestyles using the Making Every Contact Count (MECC) initiative

FOCUS GROUP SCHEDULE

Introductions:

- Offer brief introductions
- Explain the aim and purpose of the research and provide a general overview of the topics to be discussed
- Revisit ethical aspects of the study, confidentiality and anonymity and participant's participation.
- Reiterate that all responses are confidential and must not be discussed outside the group
- Reiterate that no element of this study should be discussed on any social media platform
- Advise participants that no students will be referred to the cause for concern process as a result of any contribution to the discussion
- Check all consent forms are signed.
- Check participant's views and permissions regarding audio-recording of the interview
- Explain end product of research and obtaining final report

Discussion points:

a) *"Thank you again for agreeing to attend this focus group. Firstly I would like you think about MECC and the training you have received on the initiative. Can you tell me what your understanding is of MECC?*

We are looking to examine whether students remember their training and whether they have a clear understanding of what MECC is.

Offer a prompt on elements of MECC if participants are not sure:
Prompts:

- Public Health Initiative
- Uses everyday interactions with patients/service users to promote healthy lifestyles and behaviours
- Lifestyle changes can improve health
- Smoking cessation; alcohol reduction; healthy eating; physical activity; weight management; mental health and well-being.

b) "*Thank you. Next we would like you to think about what MECC means to you. What value do you think MECC has in the clinical environment?"*

Here we are trying to establish whether the students believe that MECC is worthwhile and if they believe it is valuable in health promotion. Do they consider it to be important in their job role?

Offer prompts:

- If yes, what value does MECC bring? If no, why does MECC have no value?
- Consider who should be having MECC conversations
- Consider nurses and other health care professionals role in MECC

c) "*Thank you. Now we would like you to think about a time when you had a MECC conversation in your clinical practice. What aspects of the interaction did you find easy?"*

Here we are examining whether students feel capable, confident and motivated to address health promotion.

Prompts:

- Enablers
- Their Capability and knowledge about health promotion
- Their Motivation
- Any support received from other staff

d) *"Thank you. Continuing to think about a MECC conversation, has there been a time where you found the MECC conversation difficult or you avoided having the conversation?"*

Here we are looking to establish whether a students personal values affect their behaviour in delivery of the MECC message.

Prompts:

- Barriers
- Personal values
- Own actions influence behaviours
- Organisational factors

APPENDIX 9

ETHICS FAVOURABLE OPINION LETTER

UNIVERSITY OF LINCOLN

Application Details
Ethics Reference 2019-Feb-0158
Title of Project Making Every Contact Count_Experiences of nursing students
Lead Researcher Dr Ian Mcgonagle
Committee Human Ethics Committee (PR)
Date of Ethical Opinion 25 February 2019

Favourable Opinion
Thank you for your revised submission. The further information has been considered on behalf of the committee and I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form and supporting documentation.

The favourable ethical opinion provided is conditional to the following requirements:
All participant facing documents include the studies ethics reference
A completed risk assessment must be submitted to the relevant individual in your School before research can begin.
Electronic research data should be stored on the University's One Drive
Paper copies of research data should be stored in a locked office
Personal data should be destroyed when it is no longer necessary to contact participants

1. Commencement of the research
1.1 It is assumed that the research will commence within 12 months of the date of the favourable ethical opinion.
1.2 If the research does not commence within 12 months of the favourable opinion being issued, the lead applicant should send a written explanationfor the delay. A further written explanation should be sent after 24 months if the research has still not commenced.
1.3 If the research does not commence within 24 months, the REC may review its opinion.

2. Duration of favourable opinion
2.1 The favourable ethical opinion of the REC for a specific research study applies for the duration of the study, as detailed in your application (or any subsequent amendments).

3. Amendments
3.1 If it is proposed to make an amendment to the research, the lead applicant should submit an amendment to the REC by accessing the original application form on LEAS and creating an amendment form.

4. Monitoring
4.1 Research Ethics Committees may review a favourable opinion in the light of progress reports and any developments relevant to the study. The lead applicant is responsible for ensuring the research remains scientifically sound, safe, ethical, legal and feasible throughout its duration. The lead applicant should submit a progress report to the REC 13 months after the date on which the favourable opinion was given. Annual progress reports should be submitted thereafter.
4.2 Progress reports should be completed and submitted using the forms in LEAS.

5. Conclusion or early termination of the research
5.1 The Lead Applicant should complete the End of Study Form in LEAS once the study has completed. It is also their responsibility to inform the Committee of early termination of the project or if the work is not completed.

6. Long Term Studies
The lead applicant is responsible for ensuring that the study procedures and documentation are updated in light of legislative or policy changes and also for reasons of good practice (e.g. standards for supporting documentation). This should be documented in the progress report to the REC (see above) and, where necessary, an amendment (see above) should be submitted to the REC. The REC may review its opinion in light of legislative changes or other relevant developments.

Additional guidance may be found at here
Yours Sincerely

Prof Peter Somerville
Chair of the Human Ethics Committee

Approved list of documents:

Document Type File Name Date Version
Questionnaire questions Questionnaire V7 2nd round -includes MECC ref 19/02/2019 V7
Questionnaire questions Questionnaire V7 1st round -no MECC ref (1) 19/02/2019 V7
Questionnaire questions Questionnaire V7 2nd round -includes MECC ref 19/02/2019 V7
Participant Information Sheet Participant Information Sheet-Revised_Questionnaire_feb19 v2 19/02/2019 V2
Participant Information Sheet Participant Information Sheet-Revised_Focus Group_feb19 v2 19/02/2019 V2
Consent Form Consent Form Questionnaires V2 19/02/2019 V2
Consent Form Consent Form Focus Groups V2 19/02/2019 V2
Other documents Focus group schedule v2 19/02/2019 V2